



FACULTY OF LAW  
University of Lund

Malin Pålsson

# Marine Environmental Protection in the Arctic

Master thesis  
30 credits

Supervisor  
Annika Nilsson

International Environmental Law

Spring 2008

# Contents

<b>SUMMARY</b>	<b>1</b>
<b>SAMMANFATTNING</b>	<b>3</b>
<b>ABBREVIATIONS</b>	<b>5</b>
<b>1 INTRODUCTION</b>	<b>7</b>
1.1 Purpose	7
1.2 Delimitations	8
1.3 Method and Material	9
1.4 Defining the Arctic Region	10
1.5 Outline	11
<b>2 INTRODUCTION TO THE ARCTIC ENVIRONMENT</b>	<b>13</b>
2.1 The Arctic Environment	13
2.1.1 <i>Geography and Climate</i>	13
2.1.2 <i>The Environment</i>	13
2.1.3 <i>Natural Resources</i>	14
2.2 Marine Environmental Issues	14
2.2.1 <i>Vulnerable Ecosystems</i>	14
2.2.2 <i>Threats to the Environment</i>	14
2.2.3 <i>Land-based threats to the Marine Environment</i>	15
<b>3 THE ARCTIC LEGAL REGIME</b>	<b>17</b>
3.1 International Law and the Arctic	17
3.2 The Development of Regional Cooperation in the Arctic	18
3.2.1 <i>The Arctic Environmental Protection Strategy</i>	18
3.2.2 <i>The Arctic Council</i>	20
3.3 The Polar Regions – Environmental Similarities and Legal Differences	22
<b>4 INSTRUMENTS FOR MARINE ENVIRONMENTAL PROTECTION</b>	<b>25</b>
4.1 The Framework for Arctic Marine Environmental Protection	25
4.1.1 <i>Different Layers of Regulation</i>	25
4.1.2 <i>The Law of the Sea Convention</i>	27
4.1.3 <i>Other Global Agreements of Relevance to the Arctic Region</i>	30
4.1.4 <i>AEPS and Arctic Council Initiatives</i>	32

4.2	Regulating Land-based Marine Pollution in the Arctic	35
4.3	The Arctic States and Marine Environmental Protection	38
4.3.1	<i>The Role of Individual States</i>	38
4.3.2	<i>Examples from The Nordic States</i>	39
4.3.3	<i>Examples From Canada</i>	40
4.3.4	<i>Examples From the United States</i>	41
4.3.5	<i>The Russian Federation and Environmental Protection</i>	42
5	DISCUSSION	44
5.1	Treaty Regime or Soft Law Cooperation?	44
5.1.1	<i>Arguments for a Regime Based on Hard Law</i>	46
5.1.2	<i>Arguments for a Regime Based on Soft Law</i>	49
6	CONCLUSIONS	52
	SUPPLEMENT – MAP OF THE ARCTIC	58
	BIBLIOGRAPHY	59

# Summary

The main purpose of this thesis is to examine marine environmental protection in the Arctic. This objective has been achieved by analyzing pertinent legal instruments on the global, regional and national level. The regional cooperation of the Arctic states has also been examined, as it is of paramount importance to the effectiveness of marine environmental protection in the Arctic. However, in order to present a comprehensive account of the shape of the marine environmental protection in the region, it was also necessary to include an analysis of the Arctic legal regime as a whole. The review of the Arctic legal regime utilizes international law as a means to explain how specific issue areas in the Arctic has shaped the legal development, eventually resulting in a regime focused on environmental issues. Furthermore, the specific marine environmental issue of land-based marine pollution is given a more in-depth look, as it presents one of the greatest challenges for the purposes of legal regulation and is a major factor contributing to marine pollution in the region. As the Arctic region is dominated by its maritime areas, the future shape of marine environmental protection in the region is inextricably linked to the underlying shape of the entire legal regime in the Arctic. Thus, the future of Arctic marine environmental protection and, in extension, the entire Arctic legal regime, is also examined. This is done in the context of a hypothetical discussion in which the arguments for a treaty-based solution and a soft law, regional cooperation is given.

The Arctic is an ocean surrounded by continents, and the law of the sea has thus acted as a natural focus for the legal development in the region. The fragile nature of the Arctic marine environment makes it extremely vulnerable to the impacts of human activity, and the mounting interest in the natural resources of the region are creating new management challenges for the Arctic states. One major source of marine pollution in the Arctic stems from land-based activities, such as industrial facilities. As the sources of the pollution are part of the economic interests of the Arctic states, state sovereignty ensures that the issue remains unregulated on both a global and a regional level.

The domestic legislation of the Arctic states has traditionally constituted the main framework for marine environmental protection, but global instruments and principles are exercising an increasing influence on the national level. The United Nations Law of the Sea Convention provides the global framework for marine environmental protection, complemented by other international marine environmental agreements. On the regional level, the Arctic states adopted the Arctic Environmental Protection Strategy in response to growing concerns over the Arctic environment. The Strategy is a soft law framework promoting regional cooperation among the Arctic states. It later became part of the Arctic Council, which is an intergovernmental forum established for the purposes of addressing

questions of sustainable development as well as environmental issues. These different factors, taken together, constitute the current Arctic legal regime.

However, criticism has been voiced against the role of the Arctic states with regards to environmental protection. The soft law character has been viewed as a major disadvantage, and both the Arctic Environmental Protection Strategy and the Arctic Council have been viewed as being too unambitious and lacking concrete goals and timetables. The Arctic legal regime is found to be much less comprehensive when compared to the treaty-based regime that regulates the Antarctic, a region with very similar environment. As such, there is a discussion whether the Arctic is in need of a new legal regime, and whether it should be modelled after the one in Antarctica. The Arctic states should act now. The amount of different organizations and fora active in the Arctic is steadily increasing, which is beginning to cause a certain amount of confusion as to who is doing what. What is truly needed is structure, and regardless of which shape the future Arctic legal regime takes, the most important aspect is that the necessary political will can be mustered in order to face the challenges ahead.

# Sammanfattning

Det huvudsakliga syftet med denna uppsats är att undersöka det marina miljöskyddet i Arktis. Denna målsättning har uppnåtts genom att undersöka relevanta rättsliga instrument på global, regional och nationell nivå. Det regionala samarbetet mellan de arktiska staterna har också undersökts, eftersom detta är av yttersta vikt för ett effektivt fungerande skydd för den marina miljön. I syfte att presentera en så heltäckande framställning av det marina miljöskyddet i regionen som möjligt var det dock även nödvändigt att inkludera en analys av den rättsliga regimen i Arktis som helhet. Internationell rätt har således använts som ett medel för att visa hur specifika problemområden i Arktis har format den rättsliga utvecklingen i regionen, vars rättsliga regim slutligen antagit en miljörättslig karaktär. Utöver detta har frågan om marin förorening orsakad av landbaserade aktiviteter undersökts mer ingående. Detta problemområde valdes eftersom det är en av de största utmaningarna att reglera på rättslig väg, samt att det är en starkt bidragande faktor till den marina föroreningen i regionen. Eftersom Arktis är en region som domineras av dess havsområden, så är den framtida strukturen för marint miljöskydd i Arktis intimt kopplad till den grundläggande strukturen för den rättsliga regimen som helhet. Av denna anledning förs även en diskussion kring framtiden för det marina miljöskyddet i Arktis, och då även indirekt hela den rättsliga regimen. Denna hypotetiska diskussion hålls genom att presentera de argument som finns för en traktatbaserad rättslig regim, respektive regionalt samarbete som bygger på soft law.

Havet utgör medelpunkten i Arktis, och den rättsliga utvecklingen i regionen har av naturliga skäl fokuserat på marina frågor. Den känsliga marina miljön innebär att den är extremt sårbar för de biverkningar som mänskliga aktiviteter i området för med sig. Det ökande intresset för regionens naturtillgångar ger således upphov till nya utmaningar för de arktiska staterna. En av de största bakomliggande orsakerna till marina föroreningar i Arktis härrör från landbaserade verksamheter, som till exempel industriella anläggningar. Eftersom källorna till den här sortens förorening är verksamheter som omfattas av de arktiska staternas ekonomiska intressen och därmed även av statsuveräniteten, förblir frågan oregerad på både global och regional nivå.

De arktiska staternas nationella lagstiftning har traditionellt sett utgjort det huvudsakliga ramverket för skydd av den marina miljön, men globala instrument och principer utövar ett växande inflytande på nationell nivå. Havsrättskonventionen utgör det globala ramverket och kompletteras av ett flertal andra internationella traktater med inriktning på skydd av den marina miljön. På regional nivå antogs den arktiska miljöskyddsstrategin av de arktiska staterna, som ett resultat av ökad oro för den arktiska miljön. Miljöskyddsstrategin är ett soft law instrument vars syfte är att främja det regionala samarbetet. Det blev senare en del av det arktiska rådet, ett forum

för de arktiska regeringarna som upprättats i syfte att behandla frågor kring både hållbar utveckling och miljöfrågor. Dessa olika komponenter utgör tillsammans den nuvarande arktiska rättsliga regimen.

De arktiska staternas agerande med hänsyn till skydd av miljön har dock utsatts för kritik. Det regionala samarbetets grundläggande soft law karaktär har pekats ut som en betydande nackdel, och både den arktiska miljöskyddsstrategin och arktiska rådet anses vara för oambitiösa och i avsaknad av konkreta målsättningar och tidsramar. Den rättsordning som råder i Arktis ter sig mindre omfattande jämfört med den traktatbaserade regimen som reglerar Antarktis, en region med väldigt snarlik miljö. Det har till följd av detta uppstått en diskussion kring huruvida Arktis behöver en ny rättslig regim, och om en sådan bör struktureras med den antarktiska regimen som förebild. De arktiska staterna bör agera nu. Mängden av olika organisationer i regionen ökar ständigt, och orsakar förvirring eftersom man har svårt att få en översikt över vem som gör vad. Det som verkligen behövs är struktur, och oavsett vilken skepnad den arktiska rättsliga regimen kommer att ha i framtiden är det mest väsentliga att man kan uppbåda den politiska viljan som krävs för att bemöta de nya utmaningarna.

# Abbreviations

AEPS	Arctic Environmental Protection Strategy
AMAP	Arctic Monitoring and Assessment Programme Working Group
ATS	Antarctic Treaty System
CAFF	Conservation of Arctic Flora and Fauna Working Group
CBD	1992 Convention on Biological Diversity
CZMA	Coastal Zone Management Act
EEZ	Exclusive Economic Zone
EPPR	Emergency Prevention, Preparedness and Response Working Group
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
IMO	International Maritime Organization
IUCN	International Union for Conservation of Nature
LOSC	1982 Law of the Sea Convention
London Convention	1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter
MARPOL 73/78	1973 International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978

OSPAR	1992 Convention for the Protection of the Marine Environment of the North-East Atlantic
PAME	Protection of the Arctic Marine Environment Working Group
PSSA	Particularly Sensitive Sea Area
RPA	Regional Program of Action for the Protection of the Arctic Marine Environment from Land-based Activities
SA	Special Area ( pursuant to MARPOL 73/78 )
SDWG	Sustainable Development Working Group
UNEP	United Nations Environment Programme
WSSD	World Summit of Sustainable Development

# 1 Introduction

## 1.1 Purpose

The objective I set out to fulfill with this thesis was simple at first, consisting of examining the current framework for marine environmental protection in the Arctic region, with an in-depth look at the regulation of land-based marine pollution. This objective has not changed, and remains the main purpose of the thesis in its final shape. However, as I began to tackle the issue I quickly realized that such an objective needed an appropriate context.

Another objective of this thesis is thus to investigate what constitutes the Arctic legal regime. This will be achieved by examining the political and legal development in the Arctic region, using international law as a means to illustrate such development. The historical background and unique development that has shaped the politics of the Arctic region has naturally influenced the shape of the legal development as well. While the Arctic legal regime in its current shape is focused on environmental protection, it began with issues more related to international law in general. As such, an examination of the Arctic legal regime would by necessity also incorporate international law to a certain extent. In this thesis, international law is a means to an end rather than an objective in itself. Although international law naturally has played an important part in the development of a distinct Arctic legal regime, it is not one of the objectives of this thesis to analyze international law as a separate and distinct entity. Rather, it serves as context and forms the necessary backdrop needed for a study of the development of the Arctic legal regime.

Land-based activities that threaten the marine environment was chosen as a topic to be examined in more detail, as it is the source of a significant amount of marine pollution. Furthermore, it is an issue that is exceedingly difficult to regulate, as the sources of pollution are situated on land and thus subject to state sovereignty. Such sources are also generally part of the economic interests of a state, further complicating regulation above the national level.

The main focus thus lies on multilateral instruments, but in order to provide a comprehensive view of Arctic marine environmental protection, it was also necessary to address the domestic legislation of the Arctic states. The domestic legislation constitutes one part of the framework for marine environmental protection in the Arctic. While it is not the main focus of the thesis, it fills a complementing role. The purpose of the section on domestic legislation in this thesis is to provide examples of marine environmental protection enacted by the Arctic states.

Furthermore, this thesis was expanded to encompass the possible future shape of Arctic marine environmental protection. The future of marine environmental protection in the Arctic is inextricably linked to the future of the Arctic legal regime itself. The concomitant discussion of that topic will thus relate to the underlying shape of the Arctic legal regime as a whole. This is only natural when taking into account the strong focus on maritime issues that characterize the Arctic as a whole. The Arctic legal regime is often compared to the legal structure that governs Antarctica. I have used this comparison as the starting point for investigating the future shape of Arctic marine environmental protection. The issue will thus be examined by analyzing the existing arguments regarding the shape of the underlying structure of the Arctic legal regime. The benefits and weaknesses of both a treaty-based regime and soft law regional cooperation will be presented.

The questions that are investigated and discussed in this thesis are thus:

1. What constitutes the Arctic legal regime?
2. What constitutes the framework for marine environmental protection in the Arctic?
3. What instruments are available for the purposes of regulating land-based marine pollution in the Arctic region?
4. Would Arctic marine environmental protection benefit the most from being regulated by means of a treaty-based regime, or by a soft law approach?

## 1.2 Delimitations

This thesis is not an exhaustive study on every aspect of marine environmental protection in the Arctic, since such an undertaking would be well beyond the scope of this work. While it is an indisputable fact that transboundary environmental concerns have a great impact on the Arctic environment, I have nonetheless chosen to focus on the issues that originate *inside* the region. Thus, issues of a transboundary nature and the instruments that regulate them are not addressed in this thesis. The following delimitations have furthermore been made:

The Arctic legal regime as a whole is examined, but in a somewhat cursory manner, as an in-depth study would deviate too far from the main objective of the thesis. The concept of regime theory will be utilized as a starting point in order to better convey the way that international law has converged in the Arctic, and around which issues. I have also included a comparative study of the legal differences between Antarctica and the Arctic. It is natural, since the two regions share similar environments. The legal regime that has developed in Antarctica provides an excellent contrast, which highlights the distinctive problems of the Arctic. The comparative section is not meant to be exhaustive. Its purpose is to provide context between the legal regimes of the two polar areas, and it is thus limited to examining the main differences between them.

The framework for marine environmental protection has been limited to examining what I felt were the most pertinent instruments. There is a plethora of different organizations and institutions that are active in the Arctic region, but they will not be mentioned. Instead, I have attempted to convey an overall image of the complex situation with regards to the many different Arctic initiatives present. With regards to the section on domestic legislation, the examples given are very brief. The scope of this thesis does not allow for a more in-depth look at the purely national level. Examples of national legislation from Sweden and Finland are included, even though they do not border the Arctic Ocean directly. The examples of national legislation from the two 'land-locked' Arctic states are still relevant for the purposes of marine protection in the Arctic region without being transboundary in nature, as such issues lie beyond the scope of this thesis. The five Nordic states are given a more peripheral treatment compared to Canada and the United States. The reason behind this is the fact that both Canada and the United States have a substantial maritime and territorial presence in the Arctic, and thus also a high level of interest and influence in the region. I have been unable to find any significant examples of Russian national legislation relating to marine environmental protection in the Arctic. However, the Russian Federation has the largest land mass in the Arctic region, and exerts a noticeable impact on the Arctic marine environment. It would thus seem incomplete to make no mention whatsoever of the domestic legislation of the Russian Federation. As such, I have included a section in which Russian environmental law in general is overviewed, for the sake of comprehensiveness.

### **1.3 Method and Material**

In order to achieve the main objective of the thesis, I have focused on instruments and institutions that are active on a multilateral level. This was done in order to properly highlight the regional character of the Arctic legal regime. The traditional legal method consists of analyzing the available legal sources, such as the domestic law of a state, case law, legal customs, doctrines and in some cases preparatory work. By using the aforementioned definition, it can be said that I have utilized this type of method to a certain extent, by applying a descriptive and analytical study of the available material. In the case of this thesis, literature, articles and the documents and reports from various organizations as well as legal instruments were the primary sources of information. When using sources from the internet, I have made every effort to make use of only official sources in order to minimize the risk of faulty information.

## 1.4 Defining the Arctic Region

It is difficult to reach a consensus on how to define the Arctic region and its maritime area, since it all depends on the context.<sup>1</sup> Finding a definition of the Arctic that is applicable to all areas of science as well as international law is both complex and difficult. Each of the Arctic countries has adopted its own definition of the Arctic.<sup>2</sup> The reason for the difficulties regarding delimitation of the Arctic region is that the Arctic Ocean is surrounded by land masses, which in turn have areas of land that could be characterised as polar. This makes it difficult to define the exact southern limit of the Arctic region. There are two natural boundaries that may be used in order to define the limits of the Arctic region. One of these is based on climatic conditions and one is based on the treeline. The climatic boundary is called the 10°C summer isotherm and is considered to be an appropriate boundary between Arctic and sub-Arctic lands, if climate is considered to be the distinguishing feature of the Arctic region. The so-called treeline boundary marks the northernmost limit at which trees grow. Beyond the treeline there is mainly tundra.<sup>3</sup> However, the natural boundaries can vary considerably. It is thus difficult to determine the precise limit if one relies on the natural boundaries.<sup>4</sup>

The marine boundary of the Arctic is formed when water from the Arctic Ocean, cooled from melting ice, meets the warmer and saltier water from the southern oceans. This belt is situated at approximately 63°N in the Canadian Archipelago, and swings north between Baffin Island and the coast of west Greenland. On the eastern side of Greenland, the marine boundary lies at approximately 65°N, while in the European Arctic the marine boundary is much farther north, about 80°N to the west of Svalbard because of the North Atlantic Current. At the Bering Strait, warm Pacific water meets the Arctic Ocean at approximately 72°N, forming a boundary that stretches from Wrangel Island to Amundsen Gulf. The Arctic Monitoring and Assessment Programme (AMAP) is fully aware of the difficulties in trying to define the Arctic, and has chosen to place the boundary between 60°N and the Arctic Circle. This means that AMAP does not define the Arctic as such, but instead provides a guideline about the core area that is covered by the monitoring and assessment activities of AMAP. With regards to the terrestrial environment, the southern boundary is determined by each of the Arctic states themselves, but still lies between the Arctic Circle and 60°N.<sup>5</sup>

If the southern boundary of the Arctic region is placed at 60°N, the delimited area encompasses all the major maritime areas of the region: the Arctic Ocean, Beaufort Sea, Bering Sea, Barents Sea, Chukchi Sea, Kara

---

<sup>1</sup> Vidas, *Protecting the Polar Marine Environment*, p. 4.

<sup>2</sup> *Ibid*, p. 5.

<sup>3</sup> Rothwell, *The Polar Regions and the Development of International Law*, p. 23.

<sup>4</sup> *Ibid*, p. 24.

<sup>5</sup> AMAP, *Arctic Pollution Issues: A State of the Arctic Environment Report*, p. 7.

Sea, Laptev Sea and the Norwegian Sea. Furthermore, it includes the island groups of Greenland, Iceland, Jan Mayen, Svalbard, Franz Joseph Land, Novaya Zemlya, Severnaya Zemlya, New Siberian Islands, Wrangel Island and the islands considered to be Canadian territory situated north of mainland Canada. Extensive portions of Norway, Sweden and the Russian far north, including Siberia, fall within this boundary. Finland and Iceland are wholly within the boundary, and the state of Alaska is also included with the exception of the Panhandle area and Aleutian Islands. Of mainland Canada, areas of Yukon, the Northwest territories, Quebec and Newfoundland ( Labrador ) are north of the 60°N boundary. Thus, the states that either completely or partly fall within the Arctic region are Canada, Denmark ( Greenland ), Iceland, Finland, Norway, Sweden, Russia and the USA. The area created by placing the southern border at 60°N approximates much of the area encompassed by either the 10°C isotherm definition or the treeline definition of the Arctic.<sup>6</sup> In this thesis, it is the area encompassed by the aforementioned 60°N boundary that constitutes the definition of the Arctic region, and when the term ‘Arctic states’ are used, it refers to the above mentioned eight states that are either fully or partially within the Arctic region. I am fully aware that by placing the southern boundary of the Arctic region at 60°N means that quite an expansive amount of area is considered to be Arctic, but my opinion is that such a delimitation is the most convenient for the purposes of this thesis. The marine boundary fluctuates between approximately 63°N and 80°N, and the natural boundaries – temperature and treeline – are dependent upon environmental factors and cannot be considered to be stable enough. The terrestrial boundaries all vary according to the definitions adopted by each Arctic state. When all these factors are taken into account, the 60°N boundary cannot be considered too far-reaching and is used for the sake of simplicity. I have included a map of the Arctic region as a supplement, in order to provide some visual reference.

## 1.5 Outline

Chapter two is an introductory description of the environmental aspects of the Arctic region and the threats facing the marine environment. The issue of land-based threats to the marine environment in the Arctic will be overviewed. In chapter three, the historical and political development in the Arctic region leading to the development of a distinct Arctic legal regime will be addressed. The genesis of the Arctic multilateral cooperation forum, the Arctic Environmental Protection Strategy, is examined along with its successor, the Arctic Council. The chapter ends with a comparative section of Antarctica and the Arctic, where the main differences between their legal regimes will be presented. Chapter four examines the legal framework for marine environmental protection in the Arctic region, beginning on a global level and an examination of international legal instruments, most notably the

---

<sup>6</sup> Rothwell, *The Polar Regions and the Development of International Law*, pp. 24-25.

Law of the Sea Convention. The regional cooperative initiatives by the Arctic Environmental Protection Strategy and the Arctic Council will be reviewed, followed by an examination of the rules pertaining to land-based marine pollution. Lastly, a review of examples of domestic legislation for the purposes of marine environmental protection is given. Chapter five presents the different perspectives regarding the future shape of the Arctic legal regime: treaty-based, hard law and soft law cooperation, respectively. Chapter six is the final chapter, where I will analyze the material presented in this thesis and give my personal opinion.

## 2 Introduction to the Arctic Environment

This chapter provides an introduction to the environment of the Arctic region, providing brief descriptions of its geography, climate, and environment. After this overview, we will take a look at the marine environmental issues of the region, beginning with a general outline of marine environmental problems. The issue of land-based marine pollution will then be given a more thorough presentation.

### 2.1 The Arctic Environment

#### 2.1.1 Geography and Climate

The Arctic region consists of a deep, ice-covered and nearly isolated ocean surrounded by the land masses of Eurasia and North America, breached only at the Bering Strait and in the North Atlantic. The region is a single highly integrated system, encompassing a range of diverse land- and seascapes such as mountains, glaciers, flat plains, deep ocean basins and large rivers. The cold and the processes of freezing and thawing shape both the landscape and the life it supports. Sea ice, glaciers, permafrost and river and lake ice are all parts of the physical geography of the Arctic. The Arctic is also home to extreme climatic differences that vary greatly depending on location and season.<sup>7</sup> A sudden summer storm or freeze can wipe out an entire generation of young among the Arctic species.<sup>8</sup>

#### 2.1.2 The Environment

The ecosystem possess specific characteristics. The food chain of Arctic species is short and simple, with few species but large populations. This leads to such species having short and very site-specific breeding seasons, leaving them much more vulnerable to any degradation of their environment. As such, Arctic marine life is extremely vulnerable to impacts from human activity. Furthermore, typical Arctic environmental conditions, such as for example extreme cold, moving ice floes and low visibility, contribute to oil spill risks whilst simultaneously making oil spill response operations extremely difficult or ineffective. Regular oil spill response options may thus be significantly limited or even precluded due to the harsh environment.<sup>9</sup>

---

<sup>7</sup> Arctic Climate Impact Assessment, Chapter 1, p. 10.

<sup>8</sup> *Impacts of a Warming Arctic*, p. 4

<sup>9</sup> WWF, *Oil Spill Response Challenges in Arctic Waters*, p. 3.

## 2.1.3 Natural Resources

The Arctic region is known as a source of natural resources. Arctic minerals were discovered and exploited in the 20<sup>th</sup> century, and tourism has now added yet another economic sector to the many communities of the Arctic in recent decades. The most important economic resources are still oil and gas, fish, and minerals.<sup>10</sup> Russia's Arctic is estimated to hold the planet's largest reserves of nickel, copper and natural gas. The Beaufort Sea is being exploited for petroleum, and the Svalbard region is home to extensive mineral and oil deposits.<sup>11</sup> Despite the hostile environment and the remoteness of the region, the industrial development has accelerated in recent years, as the global demand for oil, gas and minerals has initiated a new resource rush in the Arctic.<sup>12</sup>

## 2.2 Marine Environmental Issues

### 2.2.1 Vulnerable Ecosystems

Several physical factors make Arctic marine systems unique. Such physical factors include a very high proportion of continental shelves; extremely low water temperatures; a low level of sunlight; and a strong influence from freshwater due to rivers and ice melt.<sup>13</sup> Arctic marine ecosystems are generally relatively simple with both low productivity and low biodiversity. Species are long-lived and slow-growing. This simplicity, coupled with the specialization of the species, make Arctic marine ecosystems potentially sensitive to environmental changes.<sup>14</sup> Arctic species are under constant stress to survive due to the harsh environment, and are as such especially vulnerable to any additional sources of stress, regardless of whether such additional factors are natural or human induced.<sup>15</sup>

### 2.2.2 Threats to the Environment

The region's ecological integrity is threatened by accelerated resource extraction, industrial expansion and polluting activities.<sup>16</sup> Environmental changes in the Arctic, such as for example the recession of the pack ice, are providing new opportunities to exploit the region's abundant natural resources. The prospect of new shipping routes, expanded oil and gas development and commercial fishing are also examples of such new opportunities that are likely to pose novel management challenges for the

---

<sup>10</sup> Arctic Climate Impact Assessment, Chapter 1, p. 15.

<sup>11</sup> Pagnan, *Arctic Marine Protection*, InfoNorth, p. 469.

<sup>12</sup> WWF, *A New Sea*, p. 4.

<sup>13</sup> Arctic Climate Impact Assessment, Chapter 9, p. 454.

<sup>14</sup> Arctic Climate Impact Assessment, Chapter 1, p. 12.

<sup>15</sup> VanderZwaag, Huebert and Ferrara, *Tinkering while the Arctic Marine Environment Totters*, Denver Journal of International Law and Policy Vol. 30:2, p. 134.

<sup>16</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 1.

Arctic states.<sup>17</sup> Concerns over the protection of the marine environment have also been galvanized by the present and possible environmental consequences of land-based marine pollution.<sup>18</sup> Pollution levels in the Arctic are generally lower than in temperate regions, but the development of the oil and gas industry coupled with pollution arising from mining, industrial smelters and military activities has caused serious harm and posed potential threats to plant and animal life.<sup>19</sup>

### 2.2.3 Land-based threats to the Marine Environment

Land-based marine pollution might not appear to be a major regional problem in the Arctic, as population levels in the Arctic region are relatively low. The inhabitants are spread out in small communities along the coastline, and the quantities of human sewage are thus low as well and generally cause only local effects. This assumption is misleading, as there exist major local sources of marine and coastal pollution. Large urban settlements, wastes from mining activities, oil and gas operations, nuclear activities and industrial complexes such as smelters and pulp and paper mills all contribute to marine pollution. The Russian Federation has approximately two million people living in its Arctic region, and sewage from such urban settlements is of special concern. Serious discharges of untreated sewage and wastes are generated in, amongst other places, Murmansk, Arkhangelsk and Severodvinsk.<sup>20</sup> Some of the largest and most heavily industrialized centres in the Russian Federation are situated on the banks of rivers that branch into the Arctic seas. The Yenisei and Ob rivers are the main channels for river-borne pollution into the Arctic.<sup>21</sup>

Major mining-metallurgical complexes seem to be the largest point-source contributors of land-based marine pollution in the Arctic. Two hot spots for heavy metal emissions are found within the territory of the Russian Federation; the Pechenganikel industrial complex and the Severonickel smelter complex, both situated on the Kola Peninsula. Severonickel is the largest nickel-copper smelter in the world, emitting an estimated 3 000 tonnes of copper and 2 700 tonnes of nickel annually. Pulp and paper mills are also among the land-based activities that contribute to marine pollution in the Arctic. The Russian Federation's Arkhangelsk and Solombalsky

---

<sup>17</sup> WWF, *A New Sea*, p. 4.

<sup>18</sup> Rothwell and Joyner, *Domestic perspectives and regulations in protecting the polar marine environment* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 149.

<sup>19</sup> Arctic Climate Impact Assessment, p. 564.

<sup>20</sup> VanderZwaag, *Land-based marine pollution and the Arctic: polarities between principles and practice* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 177.

<sup>21</sup> Stokke, *A legal regime for the Arctic? Interplay with the Law of the Sea Convention*, *Marine Policy* Vol. 31, p. 407.

pulp mills both dispose of wastes into the North Dvina river.<sup>22</sup> Mining wastes also enter the Arctic marine environment from the Polaris mine and the Nanisivik mine in Canada, and three former mines in Greenland are also known sources of heavy metals that end up in the sea.<sup>23</sup> The Russian Federation furthermore has an extensive pipeline network that stretches across over 10,000 kilometres of western Siberia. This network is capable of carrying 400 million tonnes of oil per year. The overall poor condition of this network, along with the many frequent leaks, remain a major land-based oil pollution concern. In 1994, oil pipeline leaks north of Urinsk spilled over 100,000 tonnes across an area of 60 square kilometres, causing some of the oil to enter the Usa and Pechora rivers.<sup>24</sup>

---

<sup>22</sup> VanderZwaag, *Land-based marine pollution and the Arctic: polarities between principles and practice* in *Protecting the Polar Marine Environment*, Vidas (ed.), pp. 178-179.

<sup>23</sup> *Ibid*, pp. 177-178.

<sup>24</sup> *Ibid*, p. 178.

# 3 The Arctic Legal Regime

This chapter will examine the development of the Arctic legal regime. The concept of regime theory will be used as the starting point in order to show how international law has congregated around specific issues in the Arctic, leading to the development of a distinct Arctic legal regime. The Arctic Environmental Protection Strategy will then be covered, along with the creation of the Arctic Council. Lastly, a comparison between the legal differences of the Antarctic and Arctic regimes will be presented. This is done in order to highlight the vastly different legal approaches that have been adopted for each region, despite the environmental similarities of the South and North Poles. It will also provide necessary context, as this difference will be revisited later in Chapter 5.

## 3.1 International Law and the Arctic

Political scientists have long been interested in how *regime theory* could be used to explain international cooperative behaviour.<sup>25</sup> A theory addressing international regimes would allow for a greater understanding of new initiatives in international cooperation, and regime theory thus became a major area of study within international relations theory.<sup>26</sup> Regime theory deals with the issues of what constitutes a regime, the factors required for regime formation, the impact that the formative process can have on regime structure, the conditions that are necessary for a regime to be efficient and how regimes respond to change.<sup>27</sup> The debate regarding the definition of a regime has been spirited, but some common features have emerged.<sup>28</sup> For a regime to come into existence, an 'issue area' is required. States and other international actors will converge around this issue area, which acts as the catalyst for regime formation.<sup>29</sup>

International law in the Arctic has been influenced by both areas beyond national jurisdiction and by coastal states' rights regarding resources and navigation. The Arctic is dominated by maritime areas, but the region also has a significant amount of land masses extending in from the south. All land areas fall under the uncontested sovereignty of one of the Arctic states, with the exception of the Svalbard Archipelago. As such, the domestic legislations of the Arctic states play a significant part in the Arctic legal regime. Despite this prevalence of national legislation there has developed an identifiable international law regime in the Arctic area. The manner in

---

<sup>25</sup> Rothwell, *The Polar Regions and the Development of International Law*, pp. 9-10.

<sup>26</sup> *Ibid*, p. 10.

<sup>27</sup> *Ibid*, p. 11.

<sup>28</sup> *Ibid*, p. 13.

<sup>29</sup> *Ibid*, p. 14.

which Arctic states govern their territories have been increasingly influenced by international law principles relating to resource management and environmental protection. Consequently, the Arctic states have entered into several bilateral and multilateral agreements as a response to specific Arctic issues. Thus, a distinctive 'Arctic international law' has begun to emerge, while the region simultaneously has become the subject of an increasing number of global international law mechanisms. These measures, building on both treaty and custom, range from marine pollution to climate change and biodiversity. This unique mixture of measures, when considered as a whole, constitute the Arctic legal regime.<sup>30</sup>

However, the Arctic lacks a regional structure that can facilitate and promote cooperation between the eight Arctic states and help develop international law in the region. Instead, the law of the sea has been viewed as a potential focus for the development of comprehensive and integrated legal mechanisms. The Arctic Ocean is of great importance to the Arctic area, and the focus on the law of the sea is thus only natural. Issues relating to the law of the sea has dominated both bilateral and regional concerns in the Arctic, but other global legal regimes are beginning to impact on this area. This is especially true with regards to global legal regimes pertaining to environmental protection.<sup>31</sup> Bilateral agreements between individual Arctic states make up the majority of the Arctic legal regime, apart from the law of the sea. Such agreements cover topics ranging from fishery agreements and wildlife protection to cooperative marine environmental measures. More recently there has been a focus on the protection of the marine, atmospheric and terrestrial environment from pollutants. Such bilateral agreements show that the Arctic states are beginning to cooperate on a greater scale.<sup>32</sup>

## **3.2 The Development of Regional Cooperation in the Arctic**

### **3.2.1 The Arctic Environmental Protection Strategy**

The Arctic region was one of the last areas of the world to develop as a political region. Few were willing to brave the risks of traveling to the area due to its severe climate, and it was thus regarded as being of little economic and political interest. However, the end of World War II signalled the beginning of the Cold War, and the Arctic became the primary theatre of operations with the invention of nuclear weapons and corresponding long-range delivery systems for such weapons. Both sides in the Cold War sought to maintain their strategic nuclear capabilities, and there was as such

---

<sup>30</sup> *Ibid*, p. 155.

<sup>31</sup> *Ibid*, p. 156.

<sup>32</sup> *Ibid*, p. 157.

practically no movement towards international cooperation in the region. It was not until the end of the 1980s that an endeavour to create an international arrangement specific to the Arctic was brought up.<sup>33</sup> In October 1987, Mikhail Gorbachev made the so-called Murmansk speech and thus initiated an effort to further Arctic cooperation. This was viewed with skepticism by western observers at first, but the dissolution of the USSR acted as a catalyst for increased cooperation. Several Arctic groups and states saw an opportunity to discuss cooperative action in the Arctic due to these events.<sup>34</sup> Severe environmental disasters that occurred in the Arctic region, such as the catastrophic nuclear accident in Chernobyl in 1986 and the massive Exxon Valdez oil spill in Alaska in 1989, acted as a galvanizing force for public interest in the Arctic environment. Along with accumulating evidence of environmental damage caused by other activities in the Arctic region, such as for example smelter emissions, this further pointed to the need for an Arctic regime.<sup>35</sup>

Finland proposed that a conference on the protection of the Arctic environment be held in 1989. On 20 September 1989 the first Consultative Meeting on the Protection of the Arctic Environment was held in Rovaniemi. Threats to the Arctic environment were identified as climate change, pollution of the marine environment and the exploitation of living and non-living resources. Finland was of the opinion that an effective protection of the Arctic required a greater amount of intergovernmental cooperation, as well as scientific research and monitoring of the ecosystem. In 1991, the Arctic Environmental Protection Strategy ( AEPS ) was adopted by the eight Arctic states.<sup>36</sup> The AEPS is a soft law framework for the purpose of environmental cooperation among the Arctic states.<sup>37</sup> The objectives of the AEPS were defined as the protection of the Arctic ecosystem, including humans; the protection, enhancement and restoration of environmental quality and sustainable utilization of natural resources; recognizing and accommodating the needs of the indigenous peoples of the Arctic; to regularly review the state of the Arctic environment; and to identify and reduce pollution. The complete elimination of pollution was stated as being the final goal.<sup>38</sup> The Strategy consisted of a set of objectives and principles, identification of six main types of pollutants, identification of the existing mechanisms for Arctic environmental protection and a section dealing with actions intended to counter pollutants. Indigenous organizations were also included in order to represent their people but were not accorded an equal status to the member states. They have subsequently been granted the status of Permanent Participants.<sup>39</sup>

---

<sup>33</sup> VanderZwaag, Huebert and Ferrara, *Tinkering while the Arctic Marine Environment Totters*, Denver Journal of International Law and Policy Vol. 30:2, p. 142.

<sup>34</sup> *Ibid*, p. 143.

<sup>35</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 7.

<sup>36</sup> Rothwell, *The Polar Regions and the Development of International Law*, p. 231.

<sup>37</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 2.

<sup>38</sup> *Declaration on the Protection of Arctic Environment*, paragraph 2.1 i-v.

<sup>39</sup> VanderZwaag, Huebert and Ferrara, *Tinkering while the Arctic Marine Environment Totters*, Denver Journal of International Law and Policy Vol. 30:2, p. 144.

The members of the AEPS would participate in the AEPS activities on a voluntary basis, rather than commit to the establishment of an international treaty. This decision was made partly because of the United States' reluctance to participate in any new multilateral organizations or entering into any new international financial commitments at that time. Developing a structure and a work plan for the Strategy was one of the most difficult challenges for the founding states. A commitment to continuous meetings on a regular basis in order to ensure that the AEPS would be an ongoing process was made. There was also agreement that the indigenous peoples were to be involved in a meaningful way.

Furthermore, four working groups were established: the Arctic Monitoring and Assessment Program ( AMAP ) group; the Protection of the Arctic Marine Environment ( PAME ) group; the Emergency Prevention, Preparedness and Response ( EPPR ) group; and the Conservation of Arctic Flora and Fauna ( CAFF ) group.<sup>40</sup> The first AEPS working group, AMAP, was established in order to address six environmental priority problems that had been previously identified by the AEPS. These six problems and the international mechanisms that governed each of them had been examined by the AEPS, and the legal regime was found to be inadequate in five out of six cases.<sup>41</sup> The six problem areas were specific pollution issues and were identified as persistent organic contaminants; oil pollution; heavy metals; noise; radioactivity; and acidification. Only in the case of radioactivity was the existing legal regime found to address the issue in an adequate manner.<sup>42</sup> PAME was assigned the task of ensuring that the terms of the Law of the Sea Convention ( LOSC ) would be utilized in order to improve marine environmental protection. The EPPR group aimed at improving emergency prevention, preparedness and response, and CAFF was to use existing global agreements in order to cooperate on the protection of Arctic flora and fauna.<sup>43</sup>

### 3.2.2 The Arctic Council

The concept of an Arctic Council originated outside of the governmental sphere, and was supported by a number of prominent Canadian academics and non-governmental organisations. It was argued that an Arctic Council could deal with issues such as scientific and exploratory activities; resources and economic development; conservation and the environment; indigenous peoples; and the application of the law of the sea.<sup>44</sup>

On 19 September 1996, the Arctic Council was created and the AEPS was placed within the Council. The United States agreed to participate in the Arctic Council if certain minimum requirements were met, namely that the

---

<sup>40</sup> *Ibid*, p. 145.

<sup>41</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, pp. 17-18.

<sup>42</sup> Rothwell, *The Polar Regions and the Development of International Law*, pp. 234-235.

<sup>43</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 18.

<sup>44</sup> Rothwell, *The Polar Regions and the Development of International Law*, pp. 242-243.

Arctic Council could not address security related issues and that any actions requiring financial assistance was entirely voluntary. These requirements were met, and the Arctic Council can thus not raise independent sources of revenue nor create a bureaucracy independent of national agencies. The Arctic Council builds on the structure of the AEPS, with the eight Arctic states and three indigenous organizations as the permanent members, and the involvement of invited observers allowed. The Council operates on a basis of consensus amongst the Arctic states.<sup>45</sup>

The AEPS, though absorbed into the Arctic Council, remains a valid Strategy for working groups of the Arctic Council. The Arctic Council acts as the guiding body of the Arctic legal regime, but it is not an international organization with a legal personality. It describes itself as a “high-level forum intended to provide a means for promoting cooperation among Arctic states... on common Arctic issues, in particular issues of sustainable development and environmental protection in the Arctic.”<sup>46</sup> The Council and the AEPS have continued to meet as required, and the Council meetings have not differed from the AEPS meetings in many regards. The primary difference between the Arctic Council and the AEPS is that the Council was specifically mandated to develop a sustainable development program.<sup>47</sup>

Recently, countries outside the circumpolar North have begun to show an interest in Arctic issues. The latest country to join the Arctic Council is China, who has obtained an observer status. This is the first non-Arctic observer nation from outside Europe. Several other non-Arctic countries have observer status at the Arctic Council, these being France, Italy, Germany, the Netherlands, the United Kingdom, Poland and Spain. According to Klepsvik, the council’s chairman of senior Arctic officials, these countries wish to be actively involved in discussions, projects and committees taking place at the Arctic Council. Klepsvik states that this presents quite a challenge to the permanent members of the Arctic Council, since they must decide to what extent the observer countries can be involved and how they should be involved. The Arctic is becoming geopolitically important and the growing interest in Arctic issues stem from climate change, shrinking sea ice and improved access to northern regions rich in oil, gas and minerals. Terry Fenge, a consultant and expert on circumpolar issues based in Ottawa, argues that the interest in Arctic issues is a boon for the Arctic nations since many of the problems found in the northern environment are the result of activities from countries outside the Arctic. Fenge believes that the Arctic Council can provide the basis for an international forum on environmental policy.<sup>48</sup>

---

<sup>45</sup> VanderZwaag, Heubert and Ferrara, *Tinkering While the Arctic Marine Environment Totters*, Denver Journal of International Law and Policy Vol. 30:2, p. 154.

<sup>46</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 5.

<sup>47</sup> VanderZwaag, Heubert and Ferrara, *Tinkering While the Arctic Marine Environment Totters*, Denver Journal of International Law and Policy Vol. 30:2, p. 155.

<sup>48</sup> CBC News at <http://www.cbc.ca/canada/north/story/2008/04/11/arctic-council.html>

### 3.3 The Polar Regions – Environmental Similarities and Legal Differences

Antarctica is a continent surrounded by ocean, while the Arctic is an ocean surrounded by continents.<sup>49</sup> Both regions have naturally harsh but fragile environments, susceptible to damage from outside sources, and their unique flora and fauna set them apart from more temperate zones.<sup>50</sup> However, because of the major differences in social, strategic and economic conditions between the two polar regions, they differ considerably in legal terms.<sup>51</sup>

In the Arctic, the focus of the legal regime is the ocean. In the Antarctic, the focus of the legal regime is the land mass. Antarctica is a demilitarized region, while the Arctic is highly strategic and militarized territory. There are 3.8 million people living in the Arctic.<sup>52</sup> Approximately 15 000 tourists visit Antarctica annually, and barely 1 000 scientists and other personnel stay year-round. The largest, and only, Antarctic ‘town’ has only 50 inhabitants, compared to cities such as Murmansk in the Arctic which boasts close to half a million.<sup>53</sup>

A treaty for the Antarctic continent, aptly named the Antarctic treaty, was negotiated as early as 1959. The treaty was never meant to constitute the sole basis for the management of Antarctic affairs, a fact that is evident from the lack of provisions dealing with resource management issues or environmental protection.<sup>54</sup> The Antarctic treaty was negotiated in order to end the competing sovereignty disputes, and to reduce military presence on the continent in favour of scientific research.<sup>55</sup> The sovereign claims of the original seven Antarctic claimants – Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom – still exist,<sup>56</sup> but have been effectively “frozen” or put on hold for the duration of the treaty. The approach to the sovereignty disputes is viewed as one of the most important factors in the stability of the region, and it has been called a “diplomatic masterstroke”.<sup>57</sup> The parties to the Antarctic Treaty built upon the initial treaty framework through additional measures that addressed existing and emerging issues. The result, commonly known as the Antarctic Treaty System (ATS), remains the only international regime that has managed the affairs of a whole continent and its region.<sup>58</sup> The ATS was not originally aimed at environmental protection, but it has continually evolved in that direction. The shift of the ATS towards environmental protection was

---

<sup>49</sup> Rothwell, *The Polar Regions and the Development of International Law*, pp. 3-4.

<sup>50</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 48.

<sup>51</sup> Vidas, *Protecting the Polar Marine Environment*, p. 6.

<sup>52</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 48.

<sup>53</sup> Vidas, *Protecting the Polar Marine Environment*, p. 8.

<sup>54</sup> Rothwell, *The Polar Regions and the Development of International Law*, p. 110.

<sup>55</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 42.

<sup>56</sup> *Ibid*, p. 41.

<sup>57</sup> *Ibid*, p. 43.

<sup>58</sup> Rothwell, *The Polar Regions and the Development of International Law*, p. 7.

complete in 1998, when the Madrid Protocol on Environmental Protection came into force.<sup>59</sup> The purpose of the Protocol was to implement measures that aimed to achieve a comprehensive protection of the Antarctic environment. The Protocol prohibits mining activities in Antarctica and has added another layer to the complexity of the ATS, which encompasses two further international Conventions and over 200 Recommendations made at Antarctic Treaty Meetings.<sup>60</sup> The ATS has made substantial contributions to international law by adopting innovative approaches to sovereignty disputes and creating a regime in which emphasis is given to freedom of scientific research. It has also established a protective measure for the flora and fauna of a whole continent and region, as well as implementing an ecosystem approach to marine living resources management. All mining activity is prohibited in order to protect the environment, and the legal system aims at protecting the environment from the impact of all human activities.<sup>61</sup>

The International Maritime Organization ( IMO ) has a marine environment committee which defines areas that are in need of special protection from maritime activities. Such protection include the designation of Special Area ( SA ) under the 1973 International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 ( MARPOL 73/78 ) as well as the particularly sensitive sea areas ( PSSA ) concept. Both designations impose restrictions on shipping. These designations are used in the Antarctic, but no such areas have been designated in the Arctic. This decision is based on the Arctic Council's Inuvik Ministerial decision in 1996, stating that no additional legal instruments for the protection of the marine environment were required and that states should concentrate on ratification and implementation of already existing treaties.<sup>62</sup>

The Arctic lacks a counterpart to the ATS.<sup>63</sup> Environmental protection for the Arctic is not based on a single international document as is the case for Antarctica.<sup>64</sup> Since Antarctica is a single continent lacking indigenous or permanent human inhabitants and has no commercial or industrial activities, it is more easily governed by a single treaty system. The main issues of the region – sovereignty over the Antarctic land mass and its offshore areas – are issues that were suited to be resolved by a treaty system. In the Arctic, however, the existing national legal systems of the eight Arctic states regulate their land areas and their concomitant marine territories. The Arctic region requires a legal regime that permits the inhabitants to thrive whilst simultaneously protecting the environment. The Arctic legal regime is thus more of a patchwork nature, consisting mainly of domestic environmental laws and the soft law regime under the Arctic Council. This is both an advantage, as each national legal system opens opportunities to increase

---

<sup>59</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 41.

<sup>60</sup> Rothwell, *The Polar Regions and the Development of International Law*, p. 6.

<sup>61</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 47.

<sup>62</sup> *Ibid*, p. 20.

<sup>63</sup> Vidas, *Protecting the Polar Marine Environment*, p. 6.

<sup>64</sup> Roginko and LaMourie, *Emerging marine environmental protection strategies for the Arctic*, Marine Policy Vol. 16, p. 265.

environmental protection, and a challenge, as the numerous different environmental laws must be coordinated.<sup>65</sup>

The ATS and the Arctic legal regime thus exist in completely different social, strategic and economic settings. The following are the most important differences between the two polar regions:

*Indigenous peoples.* The absence of a native population was seen as a major factor in the founding of the Antarctic treaty, which later evolved into the ATS. In the Arctic, the presence and demands of the indigenous peoples was one of the factors that prompted the establishment of the Arctic Council.<sup>66</sup>

*Strategic importance.* The question of strategic importance is an aspect that has diminished significantly in the post-Cold War period, but freedom of navigation was and still is a strategic military interest of the US Navy, especially with regards to submarines. The strategic importance of the Arctic is far greater than that of the Antarctic.

*Demilitarisation.* The prohibition of any measure of a military nature was one of the basic principles of the Antarctic treaty. In the Arctic, the Arctic Council Declaration states that the Council does not deal with matters related to military security. Environmental protection related to military activity is thus left to arrangements among the individual Arctic states.<sup>67</sup>

*Economic uses.* The type and scale of sources of marine pollution situated within the polar regions are a direct consequence of the differing nature and scope of economic activities in these regions. In this context, the presence and intensity of land-based sources are of prime importance, and there is a significant contrast between the Arctic and the Antarctic in this regard. Large urban settlements are present in parts of the Arctic, particularly in the Russian part, and with these settlements come heavy industry. In Antarctica, land-based sources of marine pollution originate from less than two dozen scientific stations and bases and their related facilities. The industrial complexes in the Russian Arctic are massive in comparison. In Antarctica, there are neither any known mineral deposits of commercial value, nor any expectations of oil or metal ores. The Arctic, on the other hand, may contain some of the largest petroleum reserves in the world.<sup>68</sup>

*Sovereignty disputes.* In the Antarctic, states undertook an 'agreement to disagree' for the sake of establishing a unique kind of international governance. In the Arctic, there are several maritime boundaries and jurisdictional zones that are disputed.<sup>69</sup>

---

<sup>65</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 48.

<sup>66</sup> Vidas, *Protecting the Polar Marine Environment*, p. 6.

<sup>67</sup> *Ibid*, p. 7.

<sup>68</sup> *Ibid*, p. 8.

<sup>69</sup> *Ibid*, p. 10.

# 4 Instruments for Marine Environmental Protection

In this chapter, we will examine the existing legal protection for the Arctic marine environment. In 4.1, the underlying structure for global marine environmental protection is reviewed. In order to illustrate this, the nature of environmental issues will be used as a starting point. This section also aims at conveying the complicated and many-layered structure currently existing in the Arctic due to the interplay of rules and institutions on several different levels. After that introduction, we will move on to the most important conventions and treaties that are applicable to the region. The Law of the Sea Convention is a global instrument of great importance to the Arctic, and will thus be examined more closely, followed by an overview of three other international marine environmental treaties. On the regional level, we will examine the AEPS and Arctic Council initiatives. The legal instruments available to address the issue of land-based marine pollution will be addressed in 4.2. Lastly, the domestic level will be overviewed. We will take a look at examples of domestic legislation pertaining to marine environmental protection from the eight Arctic states. Examples from the five Nordic countries will be presented, followed by Canada and the United States. A more general review of the shape of environmental law in the Russian Federation concludes this chapter.

## 4.1 The Framework for Arctic Marine Environmental Protection

### 4.1.1 Different Layers of Regulation

An environmental issue can be global, regional, transboundary, domestic, or a combination of any of these.<sup>70</sup> The governing law of such different contexts is itself diverse, both with regards to the content of any applicable rules and to the form that such rules take. Much of international environmental law is aimed at regulating environmental problems by setting common international standards and objectives for prevention or mitigation of harm. It also strives to provide a flexible rule-making process that can allow for easy and regular amendments, since technological and scientific developments require such an approach. Thus, much of this regulatory system is composed not only of multilateral treaties but also soft law techniques such as recommendations, codes of conduct and guidelines.<sup>71</sup> International environmental law has developed during the past decades, and as a result there has been an emergence of several core principles that in turn provide a framework of customary environmental law. Such principles

---

<sup>70</sup> Birnie and Boyle, *International law & the environment*, pp. 6-7.

<sup>71</sup> *Ibid*, p. 7.

include the obligation to assess potential environmental impacts and to monitor actual environmental impact; the obligation of all states to conserve the environment and its natural resources; and the obligation to conserve the environment both within and beyond areas of natural jurisdiction and sustainable development, though the list is not exhaustive. These principles of international environmental law, arising from state practice, has been incorporated in international environmental instruments. They constitute the underlying framework for global marine environmental protection and thus for the polar regions as well.<sup>72</sup>

It is impossible to examine environmental law in an international context without noticing the interplay of global, regional, sub-regional and national rules and institutions. When it comes to the marine environment there are also a variety of interrelated and sometimes overlapping treaties, active at these various levels. This phenomenon is sometimes referred to as a 'Russian doll effect': beneath one layer of international regulation there are other layers, until you reach the purely national layer.<sup>73</sup> The Arctic has become an extremely active arena for emerging international initiatives that all fall into different categories. Some arrangements feature rules that may give rise to social practices, while others center on the establishment of organizations in the sense of material entities that possess personnel and budgets. Others are not as easily classified. The scope of some initiatives are region-wide, but the Arctic is also an active zone for subregional initiatives, sometimes featuring only two states and sometimes being multilateral in character.<sup>74</sup> The AEPS and the Arctic Council, for example, are active on the region-wide, inter-governmental level, but there is also a host of various organizations in the Arctic that have proliferated since the late 1980s. Such initiatives are active on different levels, such as for example region-wide but sub-national; sub-regional and inter-governmental; and so on.<sup>75</sup> One striking feature of the recent surge in Arctic international initiatives is the prominence accorded to subnational units, such as counties and provinces, as well as non-state actors. According to some, the Arctic has become an arena for creative initiatives associated with a global civil society, as opposed to the international society. There are also efforts being made at finding ways to bring general provisions of global regimes to bear on the specific conditions existing in the Arctic.<sup>76</sup>

---

<sup>72</sup> Rothwell, *Global environmental protection instruments and the polar marine environment*. Protecting the Polar Marine Environment, Vidas (ed.), p. 57.

<sup>73</sup> Boyle, *Globalism and regionalism in the protection of the marine environment*. Protecting the Polar Marine Environment, Vidas (ed.), p. 19.

<sup>74</sup> Young, *The Structure of Arctic Cooperation: Solving Problems/Seizing Opportunities*, p. 7.

<sup>75</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 6.

<sup>76</sup> Young, *The Structure of Arctic Cooperation: Solving Problems/Seizing Opportunities*, p. 7.

## 4.1.2 The Law of the Sea Convention

The 1982 Law of the Sea Convention ( LOSC ) entered into force on 16 November 1994. Many of the provisions found in this convention repeat principles that are enshrined in earlier instruments, whilst some provisions have since become customary rules.<sup>77</sup> Article 309 prohibits reservations to the convention, thus forcing states to make an ‘all or nothing choice’ when deciding whether to become party to the convention or not.<sup>78</sup> The provisions on the protection of the marine environment are vitally important. They express principles of international environmental law and provides a framework for establishing a broad and clear structure for the law. The LOSC is viewed by some as the most important and comprehensive international environmental agreement that exists today.<sup>79</sup>

The question of whether or not the LOSC is applicable to the Arctic seas has been raised several times, due to the specific geographical, climatic, historical and political circumstances that characterise the Arctic region. It is also a fact that the LOSC does not indicate which sea or ocean it is or isn’t applicable. As such, is it even applicable to the Arctic region, and if yes, to what extent?<sup>80</sup>

There are many indications that the purpose of drafting the LOSC was to create a ‘Charter of the Oceans’ that could act as a basic framework convention dealing with all the major issues of the entire ocean space.<sup>81</sup> In the preambular section of the LOSC, the participating states declare that they were prompted by ‘the desire to settle, in a spirit of mutual understanding and cooperation, all issues relating to the law of the sea’<sup>82</sup> and that they were aware of the fact that ‘problems of ocean space are closely interrelated and need to be considered as a whole’.<sup>83</sup> The drafting history of Article 234 of the LOSC provides some interesting insight. It was negotiated between Canada, the United States and the Soviet Union, and is sometimes referred to as the “Arctic” Article.<sup>84</sup> Article 234 governs coastal states’ rights to adopt and enforce laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the EEZ. Such laws and regulations must give due regard to the

---

<sup>77</sup> Shaw, *International Law*, p. 492.

<sup>78</sup> Boyle, *Globalism and regionalism in the protection of the marine environment*. Protecting the Polar Marine Environment, Vidas (ed.), p. 21.

<sup>79</sup> de La Fayette, *The Marine Environment Protection Committee: The Conjunction of the Law of the Sea and International Environmental Law*, *The International Journal of Marine and Coastal Law* Vol. 16, p. 157.

<sup>80</sup> Vukas, *United Nations Convention on the Law of the Sea and the polar marine environment* in *Protecting the Polar Marine Environment*, Vidas (ed.), pp. 35-36.

<sup>81</sup> *Ibid*, p. 36.

<sup>82</sup> Law of the Sea Convention, Preamble, first paragraph.

<sup>83</sup> *Ibid*, third paragraph.

<sup>84</sup> Vukas, *United Nations Convention on the Law of the Sea and the polar marine environment* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 36.

rights of navigation, and the protection and preservation of the marine environment is to be based on the best available scientific evidence.<sup>85</sup> Article 234 is a result of Canadian concern over foreign vessel traffic in the Canadian Arctic, and enables a coastal state to enforce stricter rules on vessel-source pollution.<sup>86</sup>

It is evident that the LOSC was considered to be of relevance to the Arctic states when the AEPS was adopted. The Arctic states expressed their opinion on the relevance of the LOSC for the implementation of the AEPS at the First Ministerial Conference on the Protection of the Arctic Environment by the following statement:<sup>87</sup>

The implementation of the Strategy will be carried out through national legislation and in accordance with international law, including customary international law as reflected in the 1982 United Nations Convention on the Law of the Sea.

The ministers of the Arctic states concluded that preventive measures taken would be ‘consistent in particular with the 1982 United Nations Convention on the Law of the Sea’ and agreed to apply ‘the principles concerning the protection and preservation of the Marine Environment as reflected in the 1982 United Nations Convention on the Law of the Sea’.<sup>88</sup> Of the Arctic states, only the US is not party to the LOSC.<sup>89</sup> Most Arctic states generally abide by the provisions of the LOSC, though, as it is felt to reflect customary international law.<sup>90</sup>

Part XII of the LOSC contains the fundamental elements of the law relating to marine protection, both conventional and customary. The articles found in Part XII build on pre-existing law, such as regional agreements, but has provided the starting point for subsequent developments at the global, regional and national levels. Furthermore, Part XII provided the framework for Chapter 17 of Agenda 21 and is referred to as representing the international law on the subject in the 1992 Rio Conference Report.<sup>91</sup>

Part XII contains provisions of particular relevance for the polar oceans.<sup>92</sup> Article 192 stipulates the general obligation of states to protect and preserve the marine environment.

---

<sup>85</sup> Article 234.

<sup>86</sup> Stokke, *A legal regime for the Arctic? Interplay with the Law of the Sea Convention*, Marine Policy Vol. 31, p. 403.

<sup>87</sup> Vukas, *United Nations Convention on the Law of the Sea and the polar marine environment* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 34.

<sup>88</sup> *Ibid*, p. 35.

<sup>89</sup> United Nations treaty collection at <http://untreaty.org/ENGLISH/bible/englishinternetbible/partI/chapterXXI/treaty6.asp>

<sup>90</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 19.

<sup>91</sup> Boyle, *Globalism and regionalism in the protection of the marine environment* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 22.

<sup>92</sup> Vukas, *United Nations Convention on the Law of the Sea and the polar marine environment* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 42.

Article 194 deals with measures to prevent, reduce and control pollution of the marine environment. The first paragraph reads:

States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source.

Paragraph 5 of Article 194 deals with vulnerable seas, and is one of the provisions in Part XII that is of particular relevance for the polar oceans.<sup>93</sup> The provision states that measures taken in accordance with Part XII 'shall include those necessary protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life'.

Article 197 is also an important article for polar oceans.<sup>94</sup> This provision stipulates a duty for states to cooperate on a global basis, for the purposes of protecting and preserving the marine environment. Such cooperation can be direct or through a competent international organization, and aims to formulate and elaborate international rules, standards and recommended practices and procedures for marine environmental protection. Any resulting rules and standards of such cooperation must be consistent with the LOSC. As for regional cooperation, it is to take place 'as appropriate'. On both a global and regional level, 'characteristic regional features' are to be taken into account.<sup>95</sup> Cooperation on a global level is unconditionally mandatory, using the expression 'shall cooperate', while cooperation on a regional level depends on the circumstances of the region in question ( 'as appropriate' ). Regional cooperation pursuant to Article 197 bears some resemblance to regional cooperation in enclosed or semi-enclosed seas. This specific type of region is covered in Article 123(b).<sup>96</sup> Pursuant to this provision, states bordering an enclosed or semi-enclosed sea should cooperate with each other 'in the exercise of their rights and in performance of their duties' under the LOSC. As such, they 'shall endeavour' to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment. The Article also states that such coordination shall apply to the exploitation of living resources and to scientific research. Article 122 defines an enclosed or semi-enclosed sea as

a gulf, basin or sea surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States.

The definition of enclosed or semi-enclosed seas leaves much to be desired from a technical point of view, since a broad interpretation of said definition

---

<sup>93</sup> *Ibid*, p. 42.

<sup>94</sup> *Ibid*, p. 42.

<sup>95</sup> Article 197.

<sup>96</sup> Vukas, *United Nations Convention on the Law of the Sea and the polar marine environment* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 43.

would encompass almost all seas in this category. Only three major oceans and the Southern Ocean are excluded from the application of the definition. The original reason for including the issue of enclosed or semi-enclosed seas in the LOSC was an identified need to adopt special rules for such areas due to their special characteristics. These characteristics were defined as: areas where navigation was inherently complex due to the small surface and poor connection to other seas; growing dangers of pollution because of the small size of the area compounded with poor interchange of water from adjacent seas; and a necessity of taking specific precautionary measures with regards to the management of the area's living resources, as they are endangered because of their natural characteristics and pollution. The Arctic Ocean would appear to justify it being considered an enclosed or semi-enclosed sea, when taking into account the reasons for the inclusion of enclosed or semi-enclosed seas in the convention, the definition of such seas, and the characteristics of the Arctic Ocean.<sup>97</sup>

### **4.1.3 Other Global Agreements of Relevance to the Arctic Region**

Nearly all of the international conventions pertaining to the protection of the marine environment are applicable to some extent in the Arctic.<sup>98</sup> The majority of the world's oceans are protected by the existing international legal regime dealing with marine pollution, and the Arctic Ocean is no exception. Consequently, major international conventions such as the 1973 International Convention for the Prevention of Pollution from Ships and its 1978 Protocol ( MARPOL 73/78 ) and the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter ( London Convention ) are both applicable to Arctic waters.<sup>99</sup>

Pollution from ships, when it is not accidental, is operational in nature and arises from a function of the manner in which the ship operates.<sup>100</sup> MARPOL 73/78 deals with regulating the discharges of harmful substances from ships. The term 'discharge' covers any means of release such as disposal, spilling, leaking, pumping, emitting and emptying, but does not include dumping in the meaning of the London Convention.<sup>101</sup> Since the convention is not restricted only to the regulation of oil pollution from ships but also deals with other types of ship-based pollution, it provides some evidence of internationally agreed standards of environmentally sound management for the transport of hazardous wastes and chemicals.<sup>102</sup> Annexes I and II of the convention regulate oil and chemical pollution

---

<sup>97</sup> *Ibid*, p. 40.

<sup>98</sup> Rothwell, *The Polar Regions and the Development of International Law*, p. 213.

<sup>99</sup> *Ibid*, p. 209.

<sup>100</sup> Birnie and Boyle, *International Law & the Environment*, p. 359.

<sup>101</sup> MARPOL, Article 2.

<sup>102</sup> Birnie and Boyle, *International Law & the Environment*, p. 363.

respectively.<sup>103</sup> All parties are bound by Annexes I and II, but other Annexes are optional and state participation varies widely.<sup>104</sup> The convention further stipulates a responsibility for flag states to ensure that its vessels comply with the technical standards found in MARPOL 73/78.<sup>105</sup> It is difficult to measure the impact of MARPOL 73/78, although it does appear that operational pollution has declined.<sup>106</sup>

The London Convention forms the basis of a global dumping regime that operates on the basic principle that the disposal at sea of hazardous waste must be forbidden, except in cases where all other options are deemed more harmful. Hazardous waste is defined in terms of toxicity, persistence and tendency to bioaccumulate in marine organisms.<sup>107</sup> The parties to the London Convention have an obligation to promote the effective control of all sources of pollution of the marine environment, and to take all practicable steps to prevent the pollution arising because of dumping of waste and other matter.<sup>108</sup> The term ‘dumping’ used in the convention refers to any deliberate disposal of wastes or other matter at sea. The definition is not limited to dumping from vessels only and includes aircraft, platforms or other man-made structures at sea, thus encompasses any deliberate disposal at sea of vessels, aircraft, platforms or other man-made structures. The term ‘wastes or other matter’ mean material and substance of any kind, form or description.<sup>109</sup> The LOSC confirms the obligation to control dumping in Article 210, in which it refers implicitly to the London Convention when stipulating that national regulation shall be no less effective than the rules and standards set globally.<sup>110</sup> On November 7 in 1996, a Protocol to the Convention was adopted. The Protocol is intended to gradually replace the 1972 Convention. The Protocol explicitly mentions the precautionary principle, requiring that the appropriate preventative measures are taken when there are reason to believe that wastes or other matter introduced into the marine environment are likely to cause harm, even when there is no conclusive evidence to prove a causal relation between inputs and their effects. It also further states that “the polluter should, in principle, bear the cost of pollution”. The Protocol was amended in 2006 to accommodate a basis in international environmental law for the regulation of carbon capture and storage under the seabed, for the purposes of tackling climate change and ocean acidification. The amendments entered into force in February 2007.<sup>111</sup>

---

<sup>103</sup> Birnie and Boyle, *International Law and the Environment*, p. 362.

<sup>104</sup> *Ibid.*, p. 363.

<sup>105</sup> *Ibid.*, p. 364.

<sup>106</sup> *Ibid.*, p. 369.

<sup>107</sup> Stokke, *Radioactive waste in the Barents and Kara Seas: Russian implementation of the global dumping regime* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 203.

<sup>108</sup> Article I.

<sup>109</sup> Article III.

<sup>110</sup> Stokke, *Radioactive waste in the Barents and Kara seas: Russian implementation of the global dumping regime* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 204.

<sup>111</sup> About the London Convention at [http://www.imo.org/Conventions/mainframe.asp?topic\\_id=258&doc\\_id=681](http://www.imo.org/Conventions/mainframe.asp?topic_id=258&doc_id=681)

The 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic ( the OSPAR Convention ) entered into force on 25 March 1998. The OSPAR Commission consists of representatives of the contracting parties and the European Commission, and manages the work under the convention.<sup>112</sup> The OSPAR Convention both merged and modernised its predecessors, the Oslo Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, and the Paris Convention for the Prevention of Marine Pollution from Land-based Sources. The general objective of this convention is to prevent and eliminate pollution of the maritime area protected by the convention, to ensure that the ecosystems are in a sound and healthy condition and used in a sustainable way, and to protect human health. The Convention was further expanded by an Annex allowing for the protection and conservation of the marine ecosystems and biological diversity.<sup>113</sup> Contracting parties to the OSPAR convention shall apply the precautionary principle and the polluter pays principle, pursuant to Article I. The precautionary principle is defined by stating that ‘preventive measures are to be taken when there are reasonable grounds for concern that substances or energy introduced, directly or indirectly, into the marine environment may bring about hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea, even when there is no conclusive evidence of a casual relationship between the inputs and the effects.’<sup>114</sup> The OSPAR Convention is viewed by some as one of the most applicable international agreements for addressing Arctic marine pollution from various sources.<sup>115</sup> However, even though the OSPAR Commission can adopt binding decisions, it has in practice preferred to use recommendations rather than binding decisions, adopting standards that are arbitrary or compromising in nature.<sup>116</sup>

#### 4.1.4 AEPS and Arctic Council Initiatives

The most significant contribution of the AEPS have been the work carried out by its working groups. The objectives for these working groups have generally been to determine the nature and extent of specific environmental problems and to examine options in order to address such problems through cooperative action. One of the cornerstones of the AEPS is AMAP, whose primary function is to determine the level of anthropogenic pollutants in the Arctic.<sup>117</sup> It has thus carried out environmental monitoring activities, as well as attempting to harmonise ongoing activities and to promote studies and monitoring activities to close knowledge gaps. AMAP has submitted several reports on the Arctic challenges, including two comprehensive AMAP

---

<sup>112</sup> OSPAR convention website at <http://www.ospar.org/eng/html/welcome/html>

<sup>113</sup> OSPAR Quality Status Report 2000 for the North-East Atlantic, p. 36.

<sup>114</sup> Article I, paragraph 2(a).

<sup>115</sup> AMAP, *A State of the Arctic Environment Report*, p. 2.

<sup>116</sup> VanderZwaag, Huebert and Ferrara, *Tinkering while the Arctic Marine Environment Totters*, Denver Journal of International Law and Policy Vol. 30:2, p. 164.

<sup>117</sup> *Ibid*, p. 146.

Assessment Reports and more specific reports concerning climate change and oil and gas activities.<sup>118</sup> After having released a State of the Arctic Environment Report, AMAP has shifted its main focus to the examination of linkage between human health and Arctic pollutants, as well as further examination of specific pollutants.<sup>119</sup>

The PAME and EPPR working groups share a broad mandate to deal with maritime issues in the Arctic.<sup>120</sup> The EPPR is most likely the least active of the AEPS working groups. Its main objective is to develop a cooperative approach to emergency responses due to environmental accidents, with focus on risk assessments of threats to the Arctic and the development of a guide on emergency prevention, preparedness and response. The EPPR has been criticized for its inability to act when environmental disasters, such as incidences of major oil spills due to pipeline breaks in the Russian Arctic, has occurred.<sup>121</sup> However, it should be noted that the member states of the AEPS have been unwilling to provide the EPPR with the capability to respond independently, as such an option would entail significant costs. Thus, the EPPR is in practice of very limited use if and when an actual environmental emergency occurs due to its limited mandate, and its most substantial project to date has been the creation of a circumpolar map of resources that are at risk from oil spills in the Arctic. Of the various bodies that exist under the AEPS and the Arctic Council, the PAME working group is the one most focused on marine environmental issues. It was created to “describe the environmental threats to the Arctic marine environment and review the adequacy of existing international instruments pertaining to the Arctic marine environment”.<sup>122</sup>

The objectives of the PAME working group are to prevent marine pollution from land-based activities, offshore oil and gas activities as well as shipping activities; to implement national agreements and assess the need for further action; and to develop and promote integrated and cost-effective actions. The main effort of PAME is the implementation of the Regional Programme of Action for the Protection of the Arctic Marine Environment from Land-Based Activities.<sup>123</sup> The CAFF working group aims at conservation of biological diversity by protecting ecosystem, habitats and species. However, its effectiveness depends entirely on the domestic policies of the Arctic states involved, as protection of habitat areas usually only can become a reality if states are willing to implement the necessary legislation.<sup>124</sup> The Working Group on Sustainable Development ( SDWG ) was established at the first Arctic Council Ministerial Meeting in 1998. The aim

---

<sup>118</sup> Stokke, *The Law of the Sea Convention and the Idea of a Binding Regime for the Arctic Marine Environment*, p. 6.

<sup>119</sup> VanderZwaag, Huebert and Ferrara, *Tinkering while the Arctic Marine Environment Totters*, Denver Journal of International Law and Policy Vol. 30:2, p. 146.

<sup>120</sup> WWF, *A New Sea*, p. 20.

<sup>121</sup> VanderZwaag, Huebert and Ferrara, *Tinkering while the Arctic Marine Environment Totters*, Denver Journal of International Law and Policy Vol. 30:2, p. 148.

<sup>122</sup> *Ibid*, p. 149.

<sup>123</sup> *Ibid*, p. 150.

<sup>124</sup> *Ibid*, p. 151.

of the SDWG is to protect and enhance the economies, culture and health of the Arctic inhabitants in an environmentally sustainable manner. The SDWG is currently involved in projects concerning children and youth; health; resource management; cultural and ecological tourism; and living conditions in the Arctic.<sup>125</sup>

When the Arctic Council was established in 1996, the Arctic states accepted the ecosystem approach that had been discussed at the 1992 Earth Summit, which was later reconfirmed at the World Summit of Sustainable Development ( WSSD ) in 2002. An ecosystem management approach means that the need to manage human activities is seen within the context of entire ecosystems. At the WSSD, it was also reconfirmed that the LOSC provides a legal framework for all ocean activities and that key concepts such as precautionary thinking and ecosystem approach now are widely accepted. Measures intended to manage the pressures to the Arctic marine environment have largely been reactive and developed on a sector-by-sector basis. The Arctic Council felt that there was a need for a more integrated approach in order to address both existing challenges and future scenarios in a more efficient and cost-effective way. At an Arctic Council meeting held in 2002, it was agreed that a strategic plan for the purposes of Arctic marine environmental protection should be established under the PAME working group. The Arctic Marine Strategic Plan was thus developed in cooperation with the member states of the Arctic Council, the permanent participants, working groups and observers. One of the objectives of the Strategic Plan is to promote the implementation of applicable international instruments to which the Arctic Council states are party. Examples of such instruments that are given in the Strategic Plan include the LOSC, conventions and protocols under the auspices of IMO, the OSPAR convention and the United Nations Environment Programme ( UNEP ) Global Programme of Action for the Protection of the Marine Environment from Land-based Activities ( GPA ).<sup>126</sup> Other goals of the Strategic Plan are: reduction and prevention of pollution in the Arctic marine environment; conservation of Arctic marine biodiversity and ecosystem functions; promoting the health of Arctic inhabitants; and advance the sustainable use of Arctic marine resources.<sup>127</sup> The Council further states that an ecosystem-based management is considered the best approach to managing the Arctic marine environment, and requires that development activities are coordinated in a way that 'minimizes their impact on the environment and integrates thinking across environmental, socio-economic, political and sectoral realms'.<sup>128</sup> The implementation of the Strategic Plan relies on the existing mechanisms and structures of the Arctic Council, i.e., the Council meetings and the activities of the working groups. Each working group is expected to implement those activities of the Plan that relate to the group's specific objectives. PAME, for instance, is to address policy and pollution-prevention and control

---

<sup>125</sup> About the SDWG at [http://arctic-council.org/working\\_group/sdwg](http://arctic-council.org/working_group/sdwg)

<sup>126</sup> Arctic Marine Strategic Plan, p. 1.

<sup>127</sup> *Ibid*, p. 3.

<sup>128</sup> *Ibid*, p. 8.

measures related to the protection of the Arctic marine environment from both land- and sea-based activities.<sup>129</sup>

## 4.2 Regulating Land-based Marine Pollution in the Arctic

There exists a traditional belief in the assimilative capacity of the oceans. This belief holds that the oceans are capable of absorbing wastes, and that end-of-pipe standards are sufficient to achieve acceptable environmental quality standards. This thinking stands in stark contrast to the fundamental concept necessary to combat land-based pollution, namely the so-called precautionary principle. This principle, in its strictest form, calls for law and policy reforms that emphasise pollution prevention and the development of clean technologies and products. Examples of strict control measures include a ‘reverse listing’ approach to chemicals, where only chemicals listed as ‘safe’ are used or the application of best available technology with no regard to cost.<sup>130</sup> Principle 15 of the Rio Declaration on Environment and Development holds a more utilitarian view of precaution, supporting less extreme measures such as reliance on cost-benefit and risk-benefit assessments, and application of the best available technique with due regard given to the economic aspect of such an endeavour. Precaution and pollution prevention are inextricably linked, as measures aimed at preventing pollution are one of the most efficient ways of being ‘precautionary’. However, there are tensions between the principles of precaution and pollution prevention and the actual practices of land-based pollution control.<sup>131</sup>

The LOSC has a liberal approach to land-based sources of pollution.<sup>132</sup> Pursuant to Article 207(1), states shall

adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, including rivers, estuaries, pipelines and outfall structures, taking into account internationally agreed rules, standards and recommended practices and procedures.

The negotiation of global rules and standards is thus encouraged, but no attempt is made to impose a uniform global standard comparable to the one that exists for the regulation of pollution from ships. Any such global standard is not likely to be agreed upon either, considering the great diversity of sources and the widely differing socio-economic priorities of states. Instead, states are free to set their own standards as long as such standards meet the more general requirements found in Article 194. In

---

<sup>129</sup> *Ibid*, p. 12.

<sup>130</sup> VanderZwaag, *Land-based marine pollution and the Arctic: polarities between principles and practice* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 175.

<sup>131</sup> *Ibid*, p. 176.

<sup>132</sup> Boyle, *Globalism and regionalism in the protection of the marine environment* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 24.

practice, international action in order to address land-based sources of pollution take place almost exclusively on the regional level.<sup>133</sup> Regional action is most suited to addressing the issue of industrial pollution affecting an enclosed or semi-enclosed sea, as the states in question will all have a common interest in protecting their shared marine environment.<sup>134</sup>

The United Nations Environment Programme ( UNEP ) addresses environmental issues at the global and regional level.<sup>135</sup> It strives ‘to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.’<sup>136</sup> UNEP’s Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities ( GPA ) aims at preventing the degradation of the marine environment from land-based activities by helping states to realise their duty to preserve and protect the marine environment. It is designed to assist states in taking actions individually or jointly within their respective policies, priorities and resources. This is subsequently meant to lead to the prevention, reduction and control of the degradation of the marine environment, thus facilitating a recovery from the impacts of land-based activities.<sup>137</sup> The GPA calls on states to develop, within a few years’ time, national programmes of action. States should identify and assess problems, establish priorities; set management objectives; identify and select management strategies and programmes; and finally ensuring programme support, such as financial aid and new legislation. It also encourages regional cooperation in dealing with land-based marine pollution, advocating regional programmes of action. Such regional programmes should encompass, amongst other things, innovative financing mechanisms; the protection of critical habitats and endangered species; and the harmonisation of environmental standards. The GPA also emphasises the validity of weighing environmental values and interests against economic costs and benefits. However, the effectiveness of the GPA is uncertain, and has been described as “being full of undefined buzzwords and often stating the obvious”. Another criticism is that the implementation, according to the GPA’s vision, is left to rely on available national funding and private sector contributions which may or may not happen at all.<sup>138</sup>

The OSPAR convention states that contracting parties shall take all possible steps to prevent and eliminate pollution from land-based sources in accordance with the provisions of the convention, either individually or jointly.<sup>139</sup> According to the convention’s Annex I, contracting parties that adopt programmes or measures for the purpose of prevention and

---

<sup>133</sup> *Ibid*, p. 24.

<sup>134</sup> *Ibid*, p. 25.

<sup>135</sup> UNEP Organization Profile, p. 3.

<sup>136</sup> *Ibid*, p. 2.

<sup>137</sup> Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, p. 7.

<sup>138</sup> VanderZwaag, *Land-based marine pollution and the Arctic: polarities between principles and practice* in Protecting the Polar Marine Environment, Vidas (ed.), p. 183.

<sup>139</sup> Article 3.

elimination of pollution from land-based sources must use the best available techniques for point sources and the best environmental practice for point and diffuse sources. This also includes clean technology ‘where appropriate’.<sup>140</sup> Despite this, the convention does little to actually address land-based pollution and activities. It fails to establish specific control standards or set specific targets and timetables as far as regulatory measures are concerned, and leaves a wide discretion to states when it comes to the application of requirements of best available technique for point sources of land-based pollution and best environmental practices for point and diffuse sources. Management decisions require the acceptance by individual parties and majority vote standardsetting, which is one way of implementing the precautionary principle. However, this is not strictly adhered to.<sup>141</sup>

Land-based marine pollution was recognized as a problem in the AEPS, and the AMAP and PAME working groups continue to focus on addressing this issue. In 1998, the Arctic Council adopted PAME’s Regional Program of Action ( RPA ) for the Protection of the Arctic Marine Environment from Land-based Activities. The goals of the RPA are amongst other things to protect human health; prevent and reduce degradation of the marine environment and coastal areas; remediate contaminated areas and to support conservation and sustainable use of marine resources.<sup>142</sup> The RPA adopts various principles of sustainable development, including the precautionary principle, but remains silent on what measures that are necessary for the implementation of such principles. The RPA notes that integrated coastal area management is needed, which should be harmonised with the planning of river basins and use of land. The details of such efforts are, however, left to future work. Regional priorities for action on sources of pollution are identified according to three criteria: the severity of risk to human health, to the environment or to socio-economic uses; transboundary pollution effects or habitat degradation; and issues which benefit from common approaches.<sup>143</sup> The RPA leaves financial aid and technical commitments uncertain as it lacks specific budgetary commitments, and the Arctic states are only ‘encouraged’ to explore innovative financing approaches. Another weakness of the RPA is that while it urges progress reports on regional programme implementation, the details and format of such reporting procedures are left to be worked out.<sup>144</sup>

The prospects for a global convention addressing land-based marine pollution are decidedly gloomy, as ‘treaty fatigue’ is evident – states are in no hurry to enter into binding agreements. State sovereignty concerns are still of paramount importance, and the amount of activities that would need to be regulated further complicates the picture.<sup>145</sup>

---

<sup>140</sup> Annex I, Article I.

<sup>141</sup> VanderZwaag, *Land-based marine pollution and the Arctic: polarities between principles and practice* in Protecting the Polar Marine Environment, Vidas (ed.), p. 188.

<sup>142</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 21.

<sup>143</sup> VanderZwaag, *Land-based marine pollution and the Arctic: polarities between principles and practice* in Protecting the Polar Marine Environment, Vidas (ed.), p. 192.

<sup>144</sup> *Ibid.*, p. 193.

<sup>145</sup> *Ibid.*, pp. 183-184.

The global standards for land-based marine pollution existing today indicates that states most likely will seek to deal with this particular problem at a regional or sub-regional level.<sup>146</sup>

## 4.3 The Arctic States and Marine Environmental Protection

### 4.3.1 The Role of Individual States

When it comes to new initiatives and to the implementation of commitments under international cooperative fora or processes, actions taken at the domestic level is also of importance.<sup>147</sup> The role of individual states with regards to marine environmental protection should thus not be underestimated. Much of international law ultimately depends on the implementation by states on a national level. By exercising their state sovereignty and jurisdiction, they can make a practical impact in Arctic marine environmental protection in ways which international and regional regimes alone would be unable to achieve.<sup>148</sup> The Arctic states confirmed the importance of domestic environmental legislation at the Second Ministerial Conference on the Protection of the Arctic Environment in 1993.<sup>149</sup> The importance of an effective domestic legislation was seen as ‘a prerequisite to the protection of the environment.’<sup>150</sup>

Each of the Arctic countries has its own array of legislation aimed at the protection of the Arctic marine environment and its biodiversity. Federal states, such as Russia, the United States and Canada, tend to have a vast number of highly specific laws. Canada has more than 20 pieces of legislation applicable to marine issues, and several native land-claim settlement acts also incorporate marine conservation measures. The United States have nearly 30 pieces of legislation. The Nordic countries have less legislation than Canada and the United States, and usually focus on broad-based nature acts under which a wide variety of protection and conservation measures can be authorized.<sup>151</sup>

---

<sup>146</sup> Rothwell, *Global environmental protection instruments and the polar marine environment* in Protecting the Polar Marine Environment, Vidas (ed.), p. 76.

<sup>147</sup> Rothwell and Joyner, *Domestic perspectives and regulations in protecting the polar marine environment: Australia, Canada and the United States* in Protecting the Polar Marine Environment, Vidas (ed.), p. 149.

<sup>148</sup> *Ibid.*, p. 171.

<sup>149</sup> Nuuk Report, Second Ministerial Conference on the Protection of the Arctic Environment.

<sup>150</sup> The Nuuk Declaration, paragraph 4.

<sup>151</sup> Pagnan, *Arctic Marine Protection*, InfoNorth Vol. 53, p. 471.

### 4.3.2 Examples from The Nordic States

*Norway* has implemented legislation for the protection of the environment in Svalbard. The Act relating to the protection of the environment in Svalbard entered into force in 2002.<sup>152</sup> The objective of the Act is to preserve a ‘virtually untouched environment’ in Svalbard, although ‘environmentally sound settlement, research and commercial activities’ are allowed.<sup>153</sup> The Act is applicable to the entire land area of Svalbard and its waters out to the territorial limit.<sup>154</sup> The Act incorporates the precautionary principle, the polluter pays principle and the utilization of the best available techniques for activities that take place in Svalbard.<sup>155</sup> It also stipulates the implementation of protected areas encompassing all habitats and landscape types, for the purposes of maintaining areas of historical value and to protect ecosystems on land and in the sea.<sup>156</sup>

*Iceland’s* Nature Conservation Act is applicable to the terrestrial area, the territorial waters, the EEZ and the continental shelf.<sup>157</sup> The purpose of the Act is ‘to direct the interaction of man with his environment so that it harms neither the biosphere nor the geosphere, nor pollute the air, sea or water’ and to ensure that the Icelandic nature can ‘develop according to its own laws’. The conservation and utilization of resources shall be based on sustainable development.<sup>158</sup> Under this Act, sites of natural interest at sea may be protected. Such areas can be established within the territorial sea and the EEZ, and include areas on islands, reefs and on the seabed. Furthermore, areas surrounding such sites of natural interest may also be protected.<sup>159</sup>

*Denmark* has given the Greenlandic parliament strong legislative authority, and Greenland thus retains extensive powers of self-government even though it remains under Danish rule.<sup>160</sup> The Greenland Home Rule Government issued an executive order in 2007 for the purpose of establishing a protected area around the Ilulissat Icefjord.<sup>161</sup> Within the protected area, air traffic at altitudes lower than 1 000 metres is prohibited<sup>162</sup> along with navigation, anchoring and going ashore.<sup>163</sup>

---

<sup>152</sup> Overview of the Svalbard Environmental Protection Act at <http://www.lovddata.no/all/nl-20010615-079.html>

<sup>153</sup> Svalbard Environmental Protection Act, § 1.

<sup>154</sup> *Ibid.*, § 2.

<sup>155</sup> *Ibid.*, § 7 ( precautionary principle ), § 9 ( polluter pays ) and § 10 ( best available technique ).

<sup>156</sup> *Ibid.*, § 11.

<sup>157</sup> Nature Conservation Act, Article 2.

<sup>158</sup> *Ibid.*, Article 1.

<sup>159</sup> *Ibid.*, Article 54.

<sup>160</sup> About Greenland, at <http://uk.nanoq.gl/Emner/About/Political.aspx>

<sup>161</sup> Greenland Home Rule Government executive order, paragraph 1.

<sup>162</sup> *Ibid.*, paragraph 7.

<sup>163</sup> *Ibid.*, paragraphs 8 ( navigation ), 9 ( anchoring ) and 10 ( going ashore ).

The Ministry of Environment and Nature has been tasked with preparing a management plan for the protected area.<sup>164</sup>

*Finland* has a piece of national legislation called the Sea Protection Act. This legislation prohibits actions that could result in pollution to the sea on Finnish ships; platforms or other man-made structures at sea; and aircraft. Finnish citizens and associations may not take actions that could result in pollution to the sea. This prohibition is applicable to ocean space outside of Finland's EEZ. Actions that could result in pollution to the sea are defined as activities causing substances to enter the sea, directly or indirectly, and that are liable to create hazards to human health; to harm living resources or marine life; and to interfere with fishing or other legitimate uses of the sea.<sup>165</sup> Other provisions include, amongst other things, a prohibition on dumping of wastes or other matter outside of Finland's EEZ<sup>166</sup> and a prohibition on the incineration of wastes on ships or platforms and other man-made structures at sea.<sup>167</sup>

*Sweden* has implemented legislation in order to give effect to its obligations pursuant to MARPOL 73/78. The Act relative to measures against pollution caused by ships contains prohibitions on the discharge of oil. Oil may not be discharged in Swedish maritime areas; the maritime areas of another EU country; on the high seas; or in defined special areas.<sup>168</sup> Other provisions concerns the construction of ships.<sup>169</sup> Oil tankers must conform to certain standards found in MARPOL 73/78 when operating in international waters,<sup>170</sup> and the Swedish Maritime Administration must provide IMO with such information regarding the construction, equipment and operation of vessels as is required pursuant to the provisions of MARPOL 73/78.<sup>171</sup>

### 4.3.3 Examples From Canada

Canada has a long-standing commitment to the protection of the Arctic marine environment, and has taken the shape of both of unilateral action and initiatives on the bilateral, regional and global levels. In 1969, the US owners of the vessel called *Manhattan* sent it intentionally through the Northwest Passage, carrying a small cargo of oil. This was done to prove that an icebreaking bulk carrier was capable of year-round sailings between Alaska and the east coast of the United States.<sup>172</sup> The Canadian response to the

---

<sup>164</sup> *Ibid*, paragraph 11.

<sup>165</sup> Sea Protection Act, § 1.

<sup>166</sup> *Ibid*, § 7.

<sup>167</sup> *Ibid*, § 8.

<sup>168</sup> Act relative to measures against pollution caused by ships, Chapter 2, § 5.

<sup>169</sup> *Ibid*, Chapter 4, § 1.

<sup>170</sup> *Ibid*, Chapter 4, § 2.

<sup>171</sup> *Ibid*, Chapter 4, § 7.

<sup>172</sup> Rothwell and Joyner, *Domestic perspectives and regulations in protecting the polar marine environment: Australia, Canada and the United States in Protecting the Polar Marine Environment*, Vidas (ed.), p. 150.

*Manhattan* voyage was to adopt the Arctic Waters Pollution Prevention Act, which extended Canadian jurisdiction to proclaimed 'Arctic waters' by 100 miles. The Act imposed pollution control regulations, including standards for vessel construction, navigation and operation, on all ships passing through Canadian waters. Failure to comply would result in prohibition for such vessels to pass through. Furthermore, Canada extended its territorial sea, resulting in a great deal of the Northwest Passage falling under Canadian jurisdiction. Canada also began to vary its acceptance of the compulsory jurisdiction of the International Court of Justice with regards to matters dealing with Canadian jurisdiction in the Arctic.<sup>173</sup>

Canada justified these actions by pointing to a growing concern for Arctic environmental protection, and that unilateral action was the only possible course to take since international law had yet to develop sufficient measures in order to protect the area from pollution. The *Manhattan* incident and its subsequent consequences are an important milestone as it was the first time that any polar state had strongly asserted a claim to exercise sovereign right over polar waters for environmental or conservation reasons. Canada's action proved to be influential enough to have an impact on the negotiations at the Third United Nations Conference on the Law of the Sea, eventually leading to Article 234.<sup>174</sup> The Arctic Waters Pollution Prevention Act remains the most notable of Canada's efforts in order to protect its Arctic waters, but a range of other legislative and policy initiatives have also been adopted. One of these is the Arctic Marine Conservation Strategy, which was developed in the late 1980s. It laid down a number of key principles, such as for example the conservation and protection of Arctic marine waters and renewable resources for the benefit and enjoyment of present and future generations, as well as the importance of an ecosystem approach and integrated management of renewable and non-renewable resources.<sup>175</sup>

#### 4.3.4 Examples From the United States

The current US policy towards the Arctic was first articulated in a National Security Decision Memorandum from 1971, which stated that the USA would support 'rational development of the Arctic, guided by the principle of minimizing any adverse effects to the environment' whilst at the same time protecting 'essential security interests in the Arctic, including preservation of the principle of freedom of the seas and superjacent airspace'.<sup>176</sup> The security interests in Arctic marine areas have taken four principal themes, these being military security; scientific security; economic security; and environmental security. National legislation has followed these themes, although the end of the Cold War meant that military concerns

---

<sup>173</sup> *Ibid.*, p. 151.

<sup>174</sup> *Ibid.*, p. 152.

<sup>175</sup> *Ibid.*, pp. 154-155.

<sup>176</sup> *Ibid.*, pp. 156-157.

waned, while the priority of the other interests escalated.<sup>177</sup> Accordingly, the protection of the marine environment through legislation regarding conservation and protection has emerged as increasingly important in the US Arctic. The US legislation focuses on the management of coastal resources and sustaining living marine resources in the Arctic Ocean. An example of this is the Coastal Zone Management Act ( CZMA ) from 1972, which encourages US states to preserve, protect and where possible restore valuable natural coastal resources ( for example wetlands, estuaries and so on ) as well as fish and wildlife found in such habitats. Participation in the CZMA is voluntary, and Alaska is one of the participating states. The CZMA is important as it establishes the role of the state and the local governments in the development of coastal planning and management programmes. Federal assistance is provided to any coastal state willing to develop and implement a comprehensive programme of coastal management, thus encouraging states to participate in the CZMA.<sup>178</sup>

#### **4.3.5 The Russian Federation and Environmental Protection**

The current legislative framework for environmental protection in Russia consists of a set of federal laws and several “under-law” legislative acts, such as Governmental Regulations and Directives, for each of those laws. Important laws for the purposes of environmental protection in Russia are, amongst others, the federal laws “About Environmental Protection” from 2002; “On Environmental Impact Assessment ( Ecological Expertise ) from 1995; “On Wastes of Production and Consumption” from 1998; the 1995 Water Code of the Russian Federation; the 1997 Forest Code of the Russian Federation; and the 2001 Land Code of the Russian Federation. Such legislative acts constitute the basis for the state policy regarding environmental protection. The laws establish both administrative and economic instruments for environmental enforcement and compliance, as well as a set of requirements for enterprises. Examples of the most common requirements are obligatory environmental impact assessments ( ‘ecological expertise’ ) for planned activities which may cause negative environmental impacts; evaluation of environmental impacts; and implementation of the polluter pays principle.<sup>179</sup>

In 2004, administrative reforms in Russia led to the creation of a new governmental body called the Federal Ecological, Technological and Atomic Supervision Service ( Rostekhnadzor ). This institution is, according to a Governmental Directive, “the competent authority both for elaboration

---

<sup>177</sup> *Ibid*, p. 157.

<sup>178</sup> *Ibid*, p. 160.

<sup>179</sup> Sapozhnikova, *Environmental protection in Russia: the evolution from strict enforcement measures and environmental compliance control to new combined approaches based upon preventive strategies*, p. 184.

of legislative acts in the field of environmental pollution prevention, and for carrying out ecological compliance control.” Roztechnadzor is responsible for carrying out inspections and issuing permits, which is how compliance is controlled. For the purposes of enforcing compliance, there are ‘ecological fees’. Such fees are obligatory payments for air emissions, water discharges, and waste disposal. Individually calculated payments and Emission Limits Values are specified in permits, and if a plant exceeds the permissible levels of emission or operates without an appropriate permit, it must pay five times the normal payment. There are also administrative penalties in the shape of fines in the case of non-compliance.<sup>180</sup>

In practice, the actual effectiveness of Russia’s environmental legislation is undermined by administrative, financial and operational constraints. This ensures that key policy statements relating to environmental protection rarely extend beyond official rhetoric.<sup>181</sup> The use of natural resources continues to be characterized by significant levels of illegal activity, and lax enforcement of existing legislation is being encouraged by the lack of a comprehensive and coordinated monitoring system. The environmental legislation in Russia also faces significant challenges from the combined actions of the national government and commercial enterprises. The fact that an environmental protection law was recently successfully amended in order to allow the import of spent nuclear fuel is indicative of such challenges.<sup>182</sup> At the same time, the environmental movement in Russia has been assertive in attempting to force the environment back onto the government agenda. However, the overall influence of environmental non-governmental organizations is limited by a combination of public apathy and political opposition.<sup>183</sup>

---

<sup>180</sup> *Ibid.*, p. 185.

<sup>181</sup> Oldfield, *Russian Environmentalism*, *European Environment: the Journal of European Environmental Policy*, Vol. 12, No. 2, p. 126.

<sup>182</sup> *Ibid.*, p. 124.

<sup>183</sup> *Ibid.*, p. 127.

## 5 Discussion

In this chapter, the future of Arctic marine environmental protection, and in extension, the entire Arctic legal regime, will be analyzed. The arguments for a hard law, treaty-based regime and regional soft law cooperation are presented in 5.1.1 and 5.1.2, respectively.

### 5.1 Treaty Regime or Soft Law Cooperation?

In Antarctica, a treaty has provided a focus for the creation of an increasingly complex regime. The Arctic states have not adopted any regional treaty or common integrated policies that could act as such a focus for the Arctic region. The current Arctic regime is comprised of a series of very specific regimes that deal with very narrow issue areas.<sup>184</sup> The Arctic cannot be characterised as having a comprehensive legal regime. This is mostly because of the way that international law has evolved in the Arctic region. While it has no doubt responded to certain issues that are specific to the Arctic, it has still retained a general international law character. Furthermore, regional multilateral cooperation has only recently developed in the Arctic, and this has hindered the development of the Arctic legal regime.<sup>185</sup> The AEPS and the later Arctic Council are significant developments in responding to the environmental problems facing the Arctic, and they are also an important first step for the development of efficient regional cooperation. Despite this, concerns have been voiced that these regional initiatives may not be capable of addressing the environmental problems in the Arctic.<sup>186</sup>

Some of the AEPS working groups, such as AMAP, has successfully initiated new research on part of the member states. Such efforts, though, remain the exception and not the rule. While the member states of the Arctic Council and the AEPS are willing to cooperate, such cooperation is founded on the understanding that only limited resources are utilized. The AEPS/Arctic Council has been a success insofar that there was a need to develop a joint understanding of the problems in the Arctic region, but the majority of the Council and AEPS initiatives remain tinkering with a growing number of *ad hoc* projects, with no clear agenda.<sup>187</sup> Thus, the AEPS has received mixed reviews, and has also been called an

---

<sup>184</sup> Rothwell, *The Polar Regions and the Development of International Law*, p. 420.

<sup>185</sup> *Ibid*, p. 221.

<sup>186</sup> VanderZwaag, Huebert and Ferrara, *Tinkering while the Arctic Marine Environment Totters*, *Denver Journal of International Law and Policy* Vol. 30:2, p. 142.

<sup>187</sup> *Ibid*, p. 156.

“unambitious regime”.<sup>188</sup> The AEPS action plan, intended to deal with priority environmental issues, established no concrete targets, few timetables and only general national commitments. Non-governmental organizations have criticised the piecemeal nature of the AEPS efforts and its failure to create a link to global issues. The general consensus is that the greatest achievement of the AEPS was to provide a foundation for future work.<sup>189</sup> The AEPS and the Arctic Council represent a significant advance towards a more comprehensive Arctic legal regime, but none of them have sought to address the issue of whether an overall legal framework is needed or not. Both the AEPS and Arctic Council proposals indicate that the Arctic states are interested in greater coordination of Arctic affairs, and the legal regime would benefit from improved coordination.<sup>190</sup>

Would the establishment of hard law or legally binding international arrangements result in substantial added value for the Arctic region? Many of the observers of Arctic affairs view the voluntary cooperation in the Arctic as a defect to be remedied as soon as possible. Such a perspective is molded by the domestic legal systems of Europe and North America. The presumption is that a legally binding commitment will produce higher levels of compliance or conformance than commitments that are undertaken on a voluntary basis. However, according to some observers, such a presumption is faced with a number of problems, especially when viewed in the context of the international society. Firstly, rules and behavioural prescriptions rely on the fact that subjects comply with them on a voluntary basis or as a result of socialization, not out of an expectation that violation of such rules would lead to effective sanctions. This is true on a national level as well. When taken to the international level, the point is merely reinforced as the international society lacks a well-developed enforcement mechanism. Subsequently, it is argued that it would not prove to be efficient for an international regime. Proponents of this view furthermore argue that the distinction between hard law and soft law typically blurs in practice. Hard law arrangements usually evolve over time, so that the rules that are actually used differs from what was stipulated on paper from the beginning. The arrangements themselves gradually turn into social practices. Thus, the extent to which a regime is based on legally binding treaties or conventions tends to lose significance as a determinant of its success in solving well-defined problems.<sup>191</sup>

Does the lack of treaty law constitute the loss of an important opportunity to adequately deal with the issues facing the Arctic, or was a soft law approach the best that could be achieved with regards to the varied interests and capabilities of the Arctic states?<sup>192</sup>

---

<sup>188</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 8.

<sup>189</sup> *Ibid.*, p. 9.

<sup>190</sup> Rothwell, *The Polar Regions and the Development of International Law*, p. 250.

<sup>191</sup> Young, *The Structure of Arctic Cooperation: Solving Problems/Seizing Opportunities*, p. 9.

<sup>192</sup> VanderZwaag, Huebert and Ferrara, *Tinkering while the Arctic Marine Environment Totters*, *Denver Journal of International Law and Policy*, Vol. 30:2, p. 143.

## 5.1.1 Arguments for a Regime Based on Hard Law

The existing cooperative framework in the Arctic, as embodied by the Arctic Council, is characterized by a 'soft law' approach. This means that it is essentially a voluntary approach, which in turn is a reflection of a lack of enthusiasm for a more strenuous treaty approach found amongst some of the Arctic states. Priority has been given to scientific research and problem identification, resulting in less emphasis on cooperative remedial action. The existing arrangement is furthermore also a 'low-cost' approach and lacks both a permanent secretariat and real resources for cooperative action.<sup>193</sup>

While many global agreements include the Arctic, the most common criticisms of global environmental treaties are also of relevance from an Arctic point of view. Such criticism includes overlap, duplication and lack of coordination.<sup>194</sup> The current Arctic environmental legal regime suffer from gaps related to specific environmental issues, for example inadequate control of the environmental impacts of mining and incomplete biodiversity protection. Furthermore, and perhaps more importantly, the regional regime suffers from being unenforceable. It lacks specific commitments as well as targets and timetables for action, and is chronically under-funded. The Arctic legal regime thus appears incomplete when compared with the comprehensive and far-reaching regime governing Antarctica.<sup>195</sup> One of the factors that have limited the potential to take further action in the Arctic is the fact that funding can only be raised by voluntary contributions from the member states. Furthermore, the main course of action has been identification of environmental threats and the establishment of guidelines for remedial actions, while implementation has been left to national authorities.<sup>196</sup> The very structure of the working arrangement, being divided into working groups addressing different problem areas, limits the ability of the Council to deal with the complex and interrelated issues arising from the new development opportunities in the region. More importantly, the emphasis on a sectoral approach and problem-based research means that there is little opportunity to adopt an ecosystem-management perspective within the current framework.<sup>197</sup>

The sheer amount of cooperative arenas currently present in the Arctic region may easily lead to duplication of work. The national administrative layers responsible for Arctic affairs are generally thin among the governments of the Arctic states. The past decade has seen the emergence of several international-level initiatives, each with a separate set of meetings and programmes. These factors are beginning to create a certain amount of bureaucratic fatigue. Duplication of responsibilities and tasks must be

---

<sup>193</sup> WWF, *A New Sea*, p. 5.

<sup>194</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 39.

<sup>195</sup> *Ibid.*, p. 5.

<sup>196</sup> WWF, *A New Sea*, p. 21.

<sup>197</sup> *Ibid.*, p. 23.

avoided in order to avoid such cooperative overload.<sup>198</sup> It is becoming more common to hear complaints from Arctic organisations regarding the increasing difficulty to keep track of who is doing what. The underlying explanation for such complaints is a sense of uneasiness stemming from the worry that everyone might be wasting time and energy on the same things, while the really important issues are being neglected.<sup>199</sup>

The Antarctic treaty regime is viewed by many as a model that should be used in the Arctic as well. The south pole shares both a similar environment and similar environmental stress factors with its northern counterpart, and is governed by a comprehensive environmental protection treaty system.<sup>200</sup>

The concept of a binding legal regime for the Arctic region, built on the Antarctic Treaty System, has been voiced by various civil-society organizations such as the International Union for Conservation of Nature and Nature protection ( IUCN ) and the World Wide Fund for Nature ( WWF ).<sup>201</sup> WWF argues that the Arctic needs a strengthened management framework, and that such a framework must be comprehensive and ecosystem-based in order to be effective. It must also provide for an efficient management of human activities in the Arctic in order to conserve the living resources of the region without losing focus of sustainable development or neglecting the welfare of the traditional communities.<sup>202</sup>

A regional treaty for arctic marine management would provide the necessary framework for a more consistent and holistic management of the Arctic Ocean and of the expanding maritime activities that are likely to shape the future of the Arctic region. A comprehensive treaty would furthermore elicit stronger commitment from the arctic governments, and goals of sustainable development and more serious obligations to protect the environment in the shape of enforceable targets and timetables could be incorporated. Many of the building blocks of such an effective regional approach are already in place. The LOSC provides an international framework for extended protection of the Arctic marine environment, whilst the Arctic Council provides the political framework for bringing together arctic leaders and indigenous peoples. Regional arrangements such as the OSPAR Convention provide models for creating an innovative system of pollution control for a specific region. It is certainly well worth considering a comprehensive regional agreement established with the LOSC as its basis.<sup>203</sup> However, the law of the sea is inherently global in character.<sup>204</sup> Article 311 limits the freedom of parties to create new agreements which are incompatible with the effective execution of the convention's object and purpose, that affect

---

<sup>198</sup> Stokke, *Sub-regional cooperation and the protection of the Arctic marine environment: the Barents Sea* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 128.

<sup>199</sup> Langlais, *Arctic co-operation organisations: a status report*, p. 4.

<sup>200</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 1.

<sup>201</sup> Stokke, *A legal regime for the Arctic? Interplay with the Law of the Sea Convention*, *Marine Policy* Vol. 31, p. 402.

<sup>202</sup> WWF, *A New Sea*, p. 5.

<sup>203</sup> *Ibid*, p. 28.

<sup>204</sup> Boyle, *Globalism and regionalism in the protection of the marine environment* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 20.

the application of ‘the basic principles’ or the rights and obligations of other parties. In other words, the provision means that parties to the LOSC are significantly limited when it comes to concluding regional agreements. On the other hand, Article 237 specifically preserves the freedom to make further agreements in order to protect and preserve the marine environment. Such agreements are required to be ‘carried out in a manner consistent with the general principles and objectives’ of the LOSC.<sup>205</sup>

The LOSC thus comes equipped with both strong mechanisms in order to preserve its universality, whilst at the same time being replete with references to rules, programmes and cooperation on the regional level.<sup>206</sup> In this context, it becomes clear that a global law of the sea can accommodate regional approaches to certain problems, such as marine environmental protection. Regional arrangements will not be incompatible with the LOSC provided they are consistent with the object and purpose of the LOSC as laid down in Articles 237 and 311, and in compliance with the framework for marine environmental protection established by Part XII.<sup>207</sup> Article 123 in combination with Article 234 would thus appear to be an ideal starting point for Arctic states in order to develop a comprehensive treaty for the marine environment. However, for this approach to work, the United States would need to become a party to the LOSC.<sup>208</sup> The utility of the LOSC in providing adequate protection of the polar marine environment has also been subject to criticism.<sup>209</sup> Generally speaking, it is argued by some that the polar marine environment gives rise to issues that are either insufficiently addressed by the LOSC, or not addressed at all. This view is essentially correct, but it must be remembered that the LOSC attempts to cover all substantial, organisational and procedural provisions pertaining to the law of the sea in a single instrument. Considering the plethora of issues it must deal with, it is thus obliged to remain a framework convention. This ‘umbrella treaty’ approach lets the LOSC cover topics such as navigation, exploration and exploitation of living resources and the protection and preservation of the marine environment.<sup>210</sup>

According to one view, the combined effect of principles of international environmental law, the growth in marine regionalism and the obligations imposed on coastal states to cooperatively manage the marine environment by the LOSC is enough to put the Arctic states under a legal obligation to ensure that the Arctic Ocean is appropriately managed. Even if the Arctic could not be considered to be a semi-enclosed sea in the meaning of the LOSC, it does not mean that the Arctic cannot be legitimately considered a marine region. This in turn creates legal obligations for the coastal states of the region to cooperatively manage the marine environment under the terms

---

<sup>205</sup> *Ibid*, p. 21.

<sup>206</sup> *Ibid*, pp. 21-22.

<sup>207</sup> *Ibid*, p. 22.

<sup>208</sup> WWF, *A New Sea*, p. 29.

<sup>209</sup> Vukas, *United Nations Convention on the Law of the Sea and the polar marine environment* in *Protecting the Polar Marine Environment*, Vidas (ed.), p. 54.

<sup>210</sup> *Ibid*, p. 55.

of both the LOSC and general principles of international environmental law. Thus, the Arctic states could use marine regionalism as a foundation for the development of an umbrella convention dealing with the Arctic marine environment.<sup>211</sup> Such a convention could, by the implementation of protocols covering various sources of pollution, form the basis for an Arctic accord. Another similar view centres around the concept of an 'Arctic Action Plan'. The Plan would consist of implementing an umbrella convention, followed by specific protocols addressing various Arctic issues. The Arctic states could then further reinforce the Plan by submitting a proposal to the IMO for the Arctic to be classified as a Special Area under MARPOL 73/78. This would lead to a more comprehensive protection for the Arctic marine environment as coastal states could further rely on Article 234 of the LOSC in order to implement a stricter marine pollution control in their EEZ, while the Special Area designation would provide additional protection in areas beyond national jurisdiction.<sup>212</sup>

### **5.1.2 Arguments for a Regime Based on Soft Law**

Many commentators on Arctic affairs assume that the ultimate goal of international cooperation in the Arctic should be the creation of a comprehensive governance system that encompasses the entire region. The question is whether such a viewpoint can be thought of as realistic, given the important differences between the two polar regions. The Arctic is home to permanent residents, many of whom have legitimate claims to indigenous rights. The Arctic also has a long history of economic activities, both regarding renewable and non-renewable resources. The Antarctic Treaty System itself is the product of developments that took place during a span of four decades. Furthermore, negotiating a comprehensive governance system for the Arctic can be costly, and the end result could also prove to be difficult to implement, creating a range of new international issues.<sup>213</sup> Antarctica has become a model for a purely environmentally focused management regime. The development of its legal system, however, was made possible by the absence of both indigenous peoples and land-based industrial and resource uses. As such, there was no need to strike a balance between conservation and economic development in Antarctica.<sup>214</sup> The differing interests of the Arctic states regarding key issues such as shipping and oil and gas activities, and the fact that many of the issues concerned are already regulated in global or regional treaties, further underlines the fact that a legally binding Arctic environmental regime not only is politically difficult to achieve but may not be necessary in the first place.<sup>215</sup>

---

<sup>211</sup> Rothwell, *The Polar Regions and the Development of International Law*, p. 252.

<sup>212</sup> *Ibid.*, p. 253.

<sup>213</sup> Young, *The Structure of Arctic Cooperation: Solving Problems/Seizing Opportunities*, p. 8.

<sup>214</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 1.

<sup>215</sup> Stokke, *The Law of the Sea Convention and the Idea of a Binding Regime for the Arctic*

The so-called soft law is a highly controversial subject, and is viewed with dislike by some. However, the absence of a supreme authoritative body with law-making powers coupled with the political and cultural diversity found in the contemporary international society means that it is seldom easy to secure widespread consent to new rules. Even issues of urgent importance cannot guarantee agreement, and attempts at securing such agreement often result in compromises and ambiguities. Such agreements are furthermore seldom global in scope, and such constraints on the law-making process is particularly troubling in the context of developing standards for environmental protection.<sup>216</sup> The Arctic is a region where there is little history of international cooperation, and it is argued that reliance on soft law or other more informal instruments would constitute a more suitable basis for cooperation. Negotiating legally binding instruments is a protracted process, and the results yielded are often disappointing in substantive terms. Parties to hard law agreements also frequently provide themselves with loopholes such as procedures for filing objections or reservations in order to limit their exposure to new or expanded commitments.<sup>217</sup>

Furthermore, the ratification procedure for treaties and conventions is apt to be lengthy, and key parties to such agreements are usually hesitant to consider making adjustments even though circumstances may have changed, as such efforts would trigger a new round of negotiations. Any outcome of such negotiations would, in turn, require ratification in their own right. Thus, the informal arrangements of the sort that has gained prominence in the Arctic region in recent years has some distinct advantages. Since they are not legally binding, the parties are often willing to reach agreement in a relatively short amount of time and to include more far-reaching provisions in such agreements. Informal arrangements can be adjusted or revised comparatively easy in order to address new understandings regarding the current problems to be solved or on the basis of experience with the operation of the existing arrangements.<sup>218</sup>

When it comes down to measuring the effectiveness of international environmental law, the outcome of such an assessment hinges on which criteria is used. Effectiveness can have multiple meanings. It may be used in the sense of solving the problem for which the regime was established, or achieving goals set forth in a constitutive instrument. It may mean alteration of behaviour patterns, such as moving from fossil fuels to more sustainable energy options.<sup>219</sup> It may also mean enhancing national compliance with rules laid down in international agreements.<sup>220</sup> The efficiency of different regulatory techniques is largely determined by the nature of the problem; what works in one case may not work at all in others. In this respect,

---

*Marine Environment*, p. 12.

<sup>216</sup> Birnie and Boyle, *International Law & the Environment*, p. 24.

<sup>217</sup> Young, *The Structure of Arctic Cooperation: Solving Problems/Seizing Opportunities*, p. 9.

<sup>218</sup> *Ibid*, p. 10.

<sup>219</sup> Birnie and Boyle, *International Law & the Environment*, p. 9.

<sup>220</sup> *Ibid*, pp. 9-10.

flexibility and ability to incorporate new concepts and techniques should be taken advantage of.<sup>221</sup> The declaration of the Arctic Council describes it as “a high level forum”, which is an appropriate starting point when thinking about the nature and the role of the Arctic Council. The Council may be thought of as a mechanism that has been created by the Arctic states in order to explore the prospects for creating a region-wide regime for the Arctic, and to follow the leads that seem most promising in that realm. If that is held to be true, the performance of the Arctic Council should be judged in terms of generative capacity rather than its effectiveness in administering an already existing regime.<sup>222</sup>

It has also been argued that there are strong prospects for greater Arctic cooperation in the humanitarian area. This concept encompasses not only environmental matters but also scientific research; the needs of indigenous peoples; transportation and communication; and educational and cultural aspects. The advantage of this approach is that it allows for the involvement of both governmental and non-governmental organizations rather than creating a formal international organization. As such, it would not be burdened by a rigid structure but possess enough flexibility to accommodate various interests and issues. A secretariat could coordinate the work, and proposals for action on certain issue areas could be forwarded as recommendations for formal legislative or policy implementation by the separate Arctic governments. This type of approach results in greater sub-regional transborder cooperation and could thus encompass a wide spectrum of Arctic interests outside of the purely formal governmental level. It could also serve as the foundation for future international organizations.<sup>223</sup>

Rather than attempting to replicate the Antarctic treaty regime, the Arctic has the potential to become a different type of model regime. Thus, it might become the testing ground for a new type of regional environmental agreement that recognizes and accounts for both human society and economic activity.<sup>224</sup> There is no inherent reason why states with an interest in the Arctic should not or cannot cooperate in order to produce a regional regime for Arctic marine environmental protection. Regional arrangements that do not contravene the objectives of the LOSC or the rights of third states are perfectly allowable. The real test of whether functional regional arrangements can exist or not lies with the political will and scientific input needed to make such measures work. Merely drafting rules cannot solve any of the problems facing the Arctic region.<sup>225</sup>

---

<sup>221</sup> *Ibid.*, p. 10.

<sup>222</sup> Young, *The Structure of Arctic Cooperation: Solving Problems/Seizing Opportunities*, p. 10.

<sup>223</sup> Rothwell, *The Polar Regions and the Development of International Law*, pp. 254-255.

<sup>224</sup> Nowlan, *Arctic Legal Regime for Environmental Protection*, p. 1.

<sup>225</sup> Boyle, *Globalism and regionalism in the protection of the marine environment in Protecting the Polar Marine Environment*, Vidas (ed.), p. 33.

## 6 Conclusions

At first glance, there would appear to be quite an extensive amount of legal regulation available with regards to the protection of the marine environment. It would not be an exaggeration to say that the LOSC constitutes the ‘legal backbone’ of marine environmental protection in the Arctic. It provides the framework for marine environmental protection on the global level, and the Arctic states have clearly expressed both a reliance on it for the effective implementation of the regional cooperative soft law framework, as well as endorsing its provisions and principles. Part XII provides a strong foundation for the purposes of marine environmental protection in the region. The debate regarding enclosed and semi-enclosed seas is interesting, although the ambiguity of the definition regarding such areas found in the LOSC brings little clarity to the debate. The MARPOL 73/78, the London Convention and the OSPAR Convention provide, in theory, quite extensive regulation of different sources of marine pollution. However, it is difficult to measure exactly how successful these conventions have been in practice.

Ultimately, the success of international conventions rely on actions carried out on the national level. As such, it is only natural that the domestic legislation of the Arctic states has been singled out as an important factor for the purposes of Arctic marine environmental protection. Initiatives taken on the domestic level can have an impact on the regional or global level, and vice versa. Canada’s unilateral actions in response to the *Manhattan* incident, eventually resulting in Article 234 in the LOSC, illustrates this quite clearly. At the same time, international environmental principles and instruments exert an unmistakable influence on national initiatives. The interaction between what takes place at the domestic level as opposed to the international or regional level creates an interesting synergy, especially in the Arctic region. The AEPS and the Arctic Council emerged as a result of the cooperative wishes of the Arctic states, and it is wholly dependent upon the active participation of those states in order to survive.

In the same manner, it is ultimately the implementation on a domestic level that shows whether or not an international environmental principle is widely acknowledged, and the efficiency of international agreements rests upon the ability and will of single states to live up to the obligations imposed by such instruments. A single state may also arrive at a solution, or find an innovative approach, that would have been difficult or even impossible to implement on a regional or international level. Such creative leaps could act as an inspiration to the other states in the region, eventually finding a foothold amongst several states and thus becoming a ‘regional standard’ that could act as the foundation for future regional cooperative initiatives. The examples of domestic legislation that have been presented in this thesis clearly show that the Arctic states are incorporating a more holistic perspective in their environmental legislation, with focus on the prevention of environmental harm and sustainable thinking. Domestic legislation thus

has an important role to play. It simultaneously acts as the instrument for the efficient implementation of international instruments and principles, as well as being the genesis of stricter environmental standards and innovative approaches.

The focus on maritime issues has been the driving force behind the development of the Arctic legal regime. As such, it is no great surprise that the entire legal regime has gradually shifted towards an increasingly environmental outlook. However, the presence of human habitations as well as an abundance of natural resources create a dual purpose for the Arctic legal regime, namely to balance environmental concerns and human development. Such an objective is difficult to achieve even in one state, and the potential problems merely multiply when there are several states involved. On the other hand, efficient regional cooperation could alleviate much of these problem areas. The current framework for marine environmental protection in the Arctic is active on several levels at the same time. It could be described as a melting pot of domestic legislation, international instruments and principles, and regional cooperation in a myriad of different shapes. However, I feel that there is not enough synergy between the various levels of regulations. Even though instruments relating to marine environmental protection sometimes overlap, there seems to be inadequate integration or coordination between the various efforts, especially between the regional cooperative efforts in the Arctic and international conventions. While this is hardly a problem that is exclusive to the Arctic region, it may prove to be even more disastrous in this case as the increasing strain on the Arctic region needs to be dealt with decisively, and within the foreseeable future. In its current incarnation, I believe that the Arctic legal regime will not be able to efficiently deal with the pressures brought on by the increasing marine environmental challenges.

It is clear that the only way to get to grips with the overall situation in the Arctic is regional cooperation. The question of the ages, though, is what shape this cooperation would benefit the most from. It is not difficult to see the strengths and weaknesses of both hard law and soft law. There are several compelling arguments and suggestions for a hard law treaty. The Arctic states could draft a treaty where they explicitly classify the Arctic Ocean as an enclosed or semi-enclosed sea, thus finding a firm footing in the provisions of the LOSC, and keep building upwards from there. The LOSC adopted an 'all or nothing' approach, allowing no reservations. In the very best of worlds, a regional treaty for the purposes of Arctic marine environmental protection would contain a similar provision regarding reservations, as this would eliminate the risks of states trying to create loopholes or otherwise shirk any obligations that would seem too far-reaching. Unfortunately, such a provision might cause states to actively avoid becoming parties to the treaty. Furthermore, no matter how fervently one might wish for a comprehensive, hard-law treaty regime in the Arctic, one must also realize that the Arctic struggles with significantly less beneficial circumstances. In Antarctica, there was never any need to strike a balance between environmental protection and human interests.

According to one perspective, the actual border between soft law and hard law tends to blur in practice. This is, in my personal view, only natural. Law should and must evolve and be able to adjust itself accordingly, as needed, when new circumstances arise that warrant such a change. That is not to say that hard law is incapable of such change. However, the interpretation of treaties can vary greatly amongst those that are party to it. As such, hard law is usually less flexible than soft law, whose greatest strength rests with that very flexibility. But is there any chance of effective regulation whatsoever when there is no legally binding provisions and no mechanisms to ensure compliance and enforcement? The historical and political history of the Arctic region seem to tilt the scale in favour of soft law cooperation, considering the lack of prior cooperation in the region, and the many complex issues and conflicting state interests that it struggles with. On the other hand, what has happened in the past should not be an obstacle to the future, and I feel that the more problems burdening a region merely equals a greater need for more stringent solutions. Still, the very nature of environmental issues, and the methods that states utilize in order to regulate them, is inherently dependent upon the *voluntary* participation of states. Even a single defined environmental problem is generally complex and often transboundary in character, and the effective regulation of such issues is hampered by state sovereignty. This calls for a flexible approach that can accommodate technological and scientific innovations. Taking all this into regard, and the disquieting yet realistic assumption that trying to negotiate a comprehensive treaty for the purposes of Arctic marine environmental protection may very well end up as a severely protracted if not infact endless process, what should be done?

The real problem is that for a region such as the Arctic, you need *both* enforceable rules, concrete goals and set timetables, as well as a good measure of flexibility. Personally, I agree with the opinion described above in 5.1.1 regarding the existence of a legal obligation for the Arctic states, and that this legal obligation has arisen as a result of the combined effect of principles of international environmental law, marine regionalism and the obligations imposed on coastal states to cooperatively manage the marine environment by the LOSC. This ‘marine regionalism’ perspective would be able to provide the foundation needed for a regional cooperation that is inherently hard law in character. However, such a view would most likely be regarded as highly controversial by most, if not all, of the states. As such, I very much doubt that marine regionalism could provide a valid model for the regional cooperation in the Arctic.

Is there, then, any room for a ‘hybrid model’? By this I mean a management regime where the basic framework builds on soft law, but some specific issues are regulated in hard law regional treaties. It is of course true that it is always easier to replicate what has been done before, but unique problems require unique solutions. Environmental law struggles with difficulties that are not encountered in other areas of law, and thus solutions that may seem unconventional compared to more traditional legal areas may be the only

suitable option. At this point, one can wonder whether the *current* shape of the Arctic legal regime is not, in fact, a 'hybrid model' already, considering the existence of the soft law regional Arctic Council and the global treaties applicable to the Arctic. However, when I use the term 'hybrid model' I mean a clearly structured and integrated entity. Presently, the different levels of initiatives in the Arctic are not coordinated. They do not interact sufficiently to be considered as different components of a greater, comprehensive whole. The Arctic region already has a soft law framework that it could build upon, and enhance where needed. If the underlying framework remains soft law in character, it might act as incentive to secure the continued participation of states that would otherwise be reluctant to enter into a legally binding agreement. The Arctic Council could play a decisive role here, by truly acting as the high-level forum it intends to be and becoming the coordinating nexus for the Arctic legal regime. However, for this approach to work, we would need a significantly strengthened Arctic Council. The question of funding must be dealt with, or else it seems unlikely that the Council could ever hope to act as a decisive force. The Council should be the stabilizing factor in the region. The working groups of the AEPS and the Arctic Council could also be bolstered and given wider mandates and more resources.

As for the question of what should be regulated in treaty form, there are several issues that would benefit from it. Land-based marine pollution is surely one of the biggest sorrows in environmental law, especially with regards to comprehensive regulation, or rather the lack of it. The precautionary principle is a necessary component when it comes to tackling land-based marine pollution, but trying to get both the precautionary principle and state sovereignty to fit neatly together, even on the theoretical level, is decidedly difficult. However, this is one aspect of marine environmental protection that we simply cannot afford to tiptoe around cautiously forever, as it is the one source of pollution wreaking the most damage to the marine environment. Efficient measures for pollution prevention depends a great deal on continued research and technological innovations, and is thus somewhat paradoxically inextricably linked to economic growth and development. Thus, it becomes a matter of harnessing such growth in an efficient and sustainable matter. No one would expect that a global treaty for the regulation of land-based sources of pollution would emerge out of nowhere, as the issue is such a delicate one. On the other hand, everything has to start somewhere, and a regional treaty between the Arctic states regarding land-based marine pollution could, if successful, provide the inspiration necessary for further development regarding the regulation of this issue. The structures found in the GPA and the RPA could point the way for the Arctic states. The basic thoughts behind them are all sound; what they need is actual implementation. For a regional treaty concerning the regulation of land-based marine pollution in the Arctic, the provisions found in Part XII of the LOSC regarding cooperation around enclosed or semi-enclosed seas are a good starting point. Some sort of regional standard should be imposed; states could look to the regulations for ship-source pollution or, at the very least, minimum standards. The

precautionary principle and the polluter pays principle could be incorporated as they have been in the OSPAR convention, along with provisions regarding the best available technique and provisions on technical assistance.

The 'hybrid model' I have in mind thus consists of an enhanced AEPS and Arctic Council providing a soft law regional cooperative framework, in conjunction with regional treaties specifically dealing with Arctic issues, all integrated with the LOSC in the sense that the new regional treaties will not contravene the convention. Furthermore, in this hypothetical 'hybrid model', the usually troublesome question of state sovereignty might even become a boon. It is obvious that what happens at the domestic level can have an impact on the international level. Individual states could, with the support of the Arctic Council, jointly devise and implement programmes for coastal zone management and marine conservation in the Arctic, incorporating an ecosystem approach. The domestic legislation initiatives in Canada and the US could serve as inspiration, and those states could share their knowledge and experience on these topics via the Arctic Council. The Arctic states could also enhance the protection for the marine environment by submitting a joint proposal to the IMO, asking for the Arctic maritime areas beyond natural jurisdiction to be given the designation of Special Area under MARPOL 73/78 or a PSSA designation. With the prospect of increased shipping in the region as an increasingly more likely scenario, I believe that such a measure would be justified. This 'hybrid model' could also embrace the so-called humanitarian approach mentioned above in 5.1.2. To my mind, this humanitarian approach is the closest you can get to a management regime with sustainable development as one of its core principles. As the Arctic Council specifically created a working group in order to address the issue of sustainable development in the Arctic, this should be considered a natural development.

Although this may not appear as comprehensive as a single, hard law instrument for the purposes of marine environmental protection, I believe that it is more realistic. The Arctic legal regime simply has to be flexible enough to accommodate all the region-specific issues, whether these relate to the protection of the environment or economic development. Such a delicate balance is, in my opinion, something that states are likely to be extremely loathe to regulate in any kind of legally binding instrument. And in order to keep the Arctic legal regime in a working condition, we need the participation of all the Arctic states.

No matter how you look at it, some facts remains indisputable: the Arctic states have to act now, and regardless of what shape the Arctic legal regime ends up taking in the end, it must incorporate both the precautionary principle as well as the concept of sustainable development. It is my conviction that the Arctic environment stands and falls by how well we will manage to implement this in practice. Sustainable development is the key to finding a balance between human development and environmental protection. As for the precautionary principle, I personally do not see any

reason why it should not be implemented to the extent possible. If one had a choice between fitting an airplane with measures that may strictly not be necessary but that stands a very good chance of saving the lives of everyone onboard it should something go wrong, or neglecting to perform such actions by claiming that the situations those measures are supposed to deal with are merely hypothetical and need not be taken into account in practice, what would be the wisest choice? For me, the only option is the first one – better safe than sorry. And if you substitute the airplane with an entire geographic region with a fragile, unique and already endangered ecosystem and 3,8 million inhabitants, the answer certainly doesn't change.

What is *really* needed is structure and coordination, and a clear agenda with concrete goals and timetables. This, of course, means that decisive action must be taken. The bottom line is that a treaty-based regime, one building on soft law or a 'hybrid approach' could all work equally well; it is entirely up to the *participants* of such a regime. The Arctic states must show the global community that it is possible to create, agree upon and implement an efficient management regime that takes both environmental protection and human development into account.

What is the most desirable course of action to take? Standing idly by and watch as the North pole finally crumbles beneath the pressure, or rise to the challenge and attempt to solve this problem to the best of our ability?

Is the question really that hard to answer?

# Supplement – map of the Arctic



Map of the Arctic region, courtesy of the University of Texas Libraries, The University of Texas at Austin.

# Bibliography

## International instruments

1982 Law of the Sea Convention ( LOSC )

1973 International Convention for the Prevention of Pollution from Ships and its 1978 Protocol ( MARPOL 73/78 )

1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter ( London Convention )

The 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic ( OSPAR Convention )

## Domestic legislation

### Denmark ( Greenland )

Greenland Home Rule Government executive order No. 10 of 15 June 2007 on protection of Illulissat Icefjord

Available at:

[http://www.greenland.com/media\(2010,1033\)/Ilulissat\\_executive\\_order\\_No.\\_10.pdf](http://www.greenland.com/media(2010,1033)/Ilulissat_executive_order_No._10.pdf)

Last accessed: 2008-09-04

### Finland

Sea Protection Act 29.12.1994/1415 ( Merensuojelulaki/Havsskyddslag )

Available at: <http://www.finlex.fi/sv/laki/ajantasa/1994/19941415>

Last accessed: 2008-09-04

### Iceland

Nature Conservation Act No. 44 of 1999

Available at: <http://eng.umhverfisraduneyti.is/legislation/nr/389>

Last accessed: 2008-09-04

### Norway

Svalbard Environmental Protection Act

( Lov om miljøvern på Svalbard/svalbardmiljøloven, LOV-2001-06-15-79 )

Available at: <http://www.lovdata.no/all/nl-20010615-079.html>

Last accessed: 2008-09-04

### Sweden

Act relative to measures against pollution caused by ships

( Förordning ( 1980:789 ) om åtgärder mot förorening från fartyg )

## Literature

Birnie, Patricia and Boyle, Alan. *International Law and the Environment*. Oxford University Press, 2002

Shaw, Malcolm M. *International Law*. Cambridge University Press, Fifth Edition, 2003

Rothwell, Donald R. *The Polar Regions and the Development of International Law*. Cambridge University Press, 1996

Vidas, Davor ( editor ). *Protecting the Polar Marine Environment. Law and Policy for Pollution Prevention*. Cambridge University Press, 2000

## Articles

de la Fayette, Louise. *The Marine Environment Protection Committee: The Conjunction of the Law of the Sea and International Environmental Law*. *The International Journal of Maritime and Coastal Law*, Vol. 16, No 2, pp. 155-238

Oldfield, Jonathan D. *Russian Environmentalism*. *European Environment: the Journal of European Environmental Policy*, Vol. 12, No. 2, pp. 117-129.

Roginko, Alexei Yu and LaMourie, Matthew J. *Emerging marine environmental protection strategies for the Arctic*. *Marine Policy* Vol. 16, pp. 259-276.

Stokke, Schram Olav. *A legal regime for the Arctic? Interplay with the Law of the Sea Convention*. *Marine Policy* Vol. 31, pp. 402-408.

VanderZwaag, David; Huebert, Rob and Ferrara, Stacey. *The Arctic Environmental Protection Strategy, Arctic Council and Multilateral Environmental Initiatives: Tinkering while the Arctic Marine Environment Totters*. *Denver Journal of International Law and Policy*, Vol. 30:2, pp. 131-171.

## AEPS, Arctic Council and Working Group documents

AMAP, *Arctic Pollution Issues – A State of the Arctic Environment Report*, Oslo, 1997. xii + 188 pp.

Available at:

<http://www.amap.no/documents/index.cfm?dirsub=/Arctic%20Pollution%20Issues%20-%20A%20State%20of%20the%20Arctic%20Environment%20Report%20sort=default>

Last accessed: 2008-09-04

Arctic Climate Impact Assessment

Available at: <http://www.acia.uaf.edu/pages/scientific.html>

Last accessed: 2008-09-04

Arctic Marine Strategic Plan

Available at:

[http://arcticportal.org/uploads/vx/IW/vxIWcyCi\\_7UnSBwZDbPVug/AMSP-Nov-2004.pdf](http://arcticportal.org/uploads/vx/IW/vxIWcyCi_7UnSBwZDbPVug/AMSP-Nov-2004.pdf)

Last accessed: 2008-09-04

Declaration on the Protection of Arctic Environment

Available at: [http://arctic-council.org/filearchive/artic\\_environment.pdf](http://arctic-council.org/filearchive/artic_environment.pdf)

Last accessed: 2008-09-04

Impacts of a Warming Arctic: Arctic Climate Impact Assessment.  
Cambridge University Press, 2004.

Available at: <http://amap.no/acia/>

Last accessed: 2008-09-04

The Nuuk Declaration

Available at:

[http://arctic-council.npolar.no/Archives/AEPS%20Docs/Arctic%20Council\\_The%20Nuuk%20Declaration.htm](http://arctic-council.npolar.no/Archives/AEPS%20Docs/Arctic%20Council_The%20Nuuk%20Declaration.htm)

Last accessed: 2008-09-04

The Nuuk Report from the Second Ministerial Conference on the Protection  
of the Arctic Environment

Available at:

[http://arctic-council.npolar.no/Archives/AEPS%20Docs/Arctic%20Council\\_Nuuk%20Report.htm](http://arctic-council.npolar.no/Archives/AEPS%20Docs/Arctic%20Council_Nuuk%20Report.htm)

Last accessed: 2008-09-04

## **IUCN documents**

Nowlan, Linda ( 2001 ). *Arctic Legal Regime for Environmental Protection*.  
IUCN, Gland, Switzerland and Cambridge, UK and ICCEL, Bonn, Germany.  
xii + 70 pp.

Available at: <http://data.iucn.org/dbtw-wpd/edocs/EPLP-044.pdf>

Last accessed: 2008-09-04

## **UNEP documents**

United Nations Environment Program ( UNEP ) *Global Programme of  
Action for the Protection of the Marine Environment from Land-based  
Activities*. Adopted on 3 November 1995.

Available at:

[http://www.gpa.unep.org/documents/full\\_text\\_of\\_the\\_english.pdf](http://www.gpa.unep.org/documents/full_text_of_the_english.pdf)

Last accessed: 2008-09-04

UNEP Organization Profile

Available at: <http://www.unep.org/PDF/UNEPOrganizationProfile.pdf>

Last accessed: 2008-09-04

## **OSPAR documents**

Quality Status Report 2000 for the North-East Atlantic

Available at: <http://www.ospar.org/eng/html/welcome.html>, click on the 'Quality Status Report' bar in the menu at the left side.

Last accessed: 2008-08-10

## **Other material**

Langlais, Richard. *Arctic co-operation organisation: a status report.*

Available at:

[http://www.arcticparl.org/\\_res/site/File/images/conf4\\_langlais.pdf](http://www.arcticparl.org/_res/site/File/images/conf4_langlais.pdf)

Last accessed: 2008-09-04

Pagnan, Jeanne L. *Arctic Marine Protection.* InfoNorth, vol. 53, No. 4, December 2000, pp. 469-476.

Available at: [http://www.arctic.ucalgary.ca/index.php?page=arctic\\_contents](http://www.arctic.ucalgary.ca/index.php?page=arctic_contents)

Last accessed: 2008-09-04

Sapozhnikova, Victoria. *Environmental protection in Russia: the evolution from strict enforcement measures and environmental compliance control to new combined approaches based upon preventive strategies.*

International Network for Environmental Compliance and Enforcement, 7<sup>th</sup> Conference, 2005

Available at: <http://www.inece.org/conference/7/vol1/Sapozhinikova.pdf>

Last accessed: 2008-09-04

Stokke, Schram Olav. *The Law of the Sea Convention and the Idea of a Binding Regime for the Arctic Marine Environment.* Seventh conference of Parliamentarians of the Arctic Region, Kiruna, 2006.

Available at:

[http://www.arcticparl.org/\\_res/site/File/images/Underlagsrapport%20eng-rysk3.pdf](http://www.arcticparl.org/_res/site/File/images/Underlagsrapport%20eng-rysk3.pdf)

Last accessed: 2008-09-04

WWF. *A New Sea. The need for a regional agreement on management and conservation of the arctic marine environment.* Published by WWF International Arctic Programme, Oslo, 2008.

Available at:

[http://assets.panda.org/downloads/a\\_new\\_sea\\_jan08\\_final\\_11jan08.pdf](http://assets.panda.org/downloads/a_new_sea_jan08_final_11jan08.pdf)

Last accessed: 2008-09-04

WWF. *Oil Spill Response Challenges in Arctic Waters*. Published by WWF International Arctic Programme, Oslo, 2007.

Available at:

[http://assets.panda.org/downloads/nuka\\_oil\\_spill\\_response\\_report\\_final\\_jan\\_08.pdf](http://assets.panda.org/downloads/nuka_oil_spill_response_report_final_jan_08.pdf)

Last accessed: 2008-09-04

Young, Oran R. *The Structure of Arctic Cooperation: Solving Problems/Seizing Opportunities*. Fourth conference of Parliamentarians of the Arctic Region, Rovaniemi, 2000.

Available at: [http://www.arcticparl.org/\\_res/site/File/images/conf4\\_sac.pdf](http://www.arcticparl.org/_res/site/File/images/conf4_sac.pdf)

Last accessed: 2008-09-04

## Websites

CBC News, 'Non-northern nations get more interested in Arctic Council' at <http://www.cbc.ca/canada/north/story/2008/04/11/arctic-council.html>

Last accessed: 2008-09-04

The London Convention at

[http://www.imo.org/Conventions/mainframe.asp?topic\\_id=258&doc\\_id=681](http://www.imo.org/Conventions/mainframe.asp?topic_id=258&doc_id=681)

Last accessed: 2008-09-04

The OSPAR Convention website at

<http://www.ospar.org/eng/html/welcome/html>

Last accessed: 2008-09-04

Sustainable Development Working Group at

[http://arctic-council.org/working\\_group/sdwg](http://arctic-council.org/working_group/sdwg)

Last accessed: 2008-09-04

United Nations treaty collection, Law of the Sea Convention at

<http://untreaty.un.org/ENGLISH/bible/englishinternetbible/partI/chapterXXI/treaty6.asp>

Last accessed: 2008-09-04